Environment: Children First

unicef
United Nations Children's Fund

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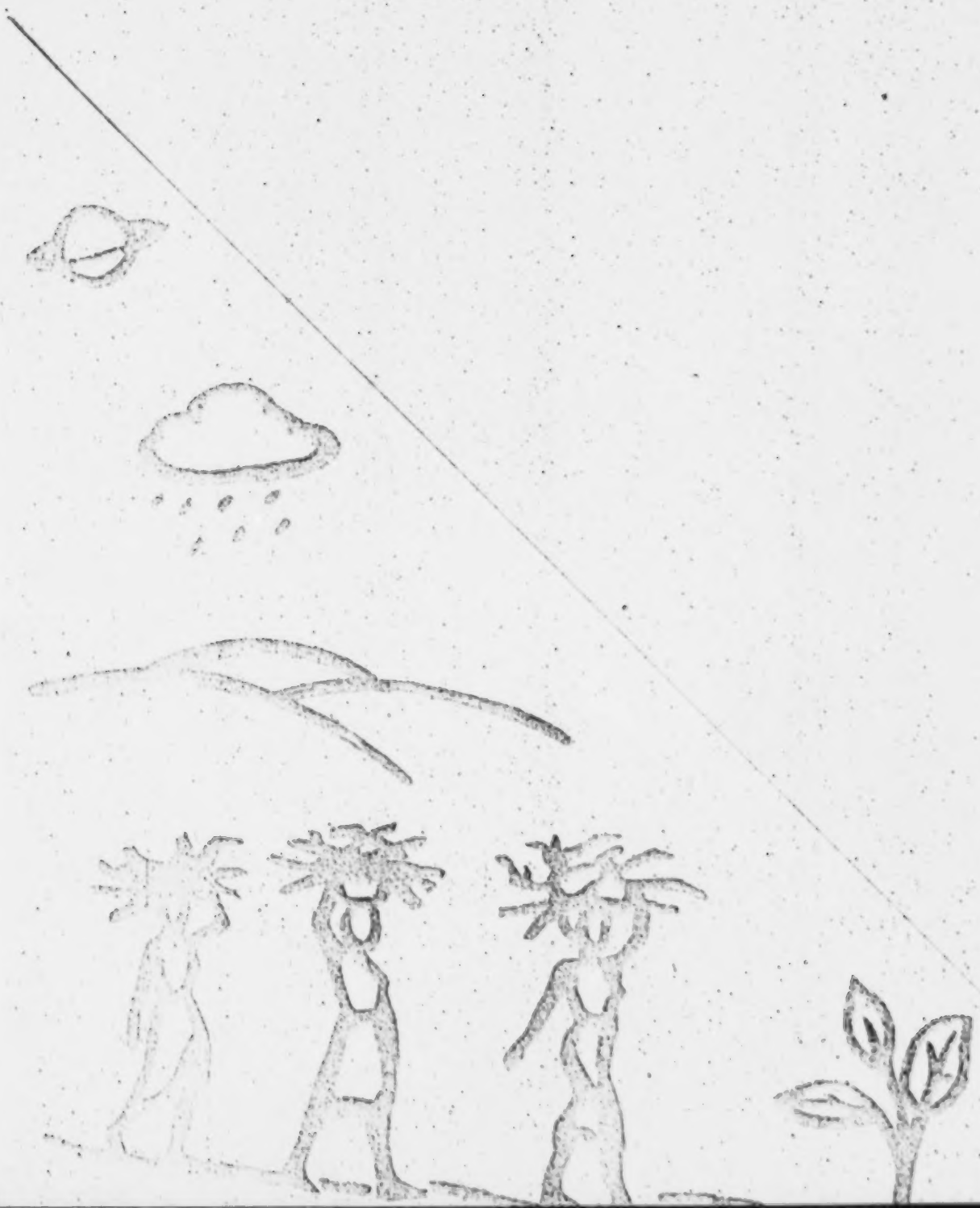

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The Earth Summit and children

James P. Grant, Executive Director of UNICEF, and Maurice F. Strong, Secretary-General of the United Nations Conference on Environment and Development (UNCED), outline how children's issues can be addressed through the Earth Summit.

Why does the Earth Summit — the United Nations Conference on Environment and Development — matter for children?

Behind the technical complexities and protocol necessary for the Conference, to be held in Rio de Janeiro in June 1992, the answer is very simple: children are all our futures — and they are vulnerable, just like the environment itself.

In 1987 the World Commission on Environment and Development reported eloquently on children's vulnerability to environmental degradation:

"We borrow environmental capital from future generations with no intention or prospect of repaying. They may damn us for our spendthrift ways, but they can never collect our debt to them. We act as we do because we can get away with it: future generations do not vote; they have no political or financial power, they cannot challenge our decisions. But the results of the present profligacy are rapidly closing the options for future generations. Most of today's decision makers will be dead before the planet feels the heavier effects of acid precipitation, global warming, ozone depletion, or widespread desertification and species loss. Most of the young voters of today will still be alive."

We have seen in the last few years that children's lives can be saved and improved if we all make the effort: good international and national leadership can adopt policies and programmes to release the energies and talents of millions of 'ordinary' people to work for their own development and well-being.

The successes of global child immunization programmes and wider primary health care initiatives show what can be done.

The Earth Summit's task is to set the world on a new path for 'sustainable development' which will protect the environment and all our common resources for our future generations.

To do this we should focus on three broad 'action areas':

1. The Earth Charter and Agenda 21: the Earth Charter, the statement of principles by the Earth Summit, offers a way to protect children — and others — from the effects of environmental degradation. Many of the 40,000 children who die every day are the victims of unsafe water, disease and malnutrition — the results of poverty and degradation of their immediate environment. Children's growing minds and bodies are particularly susceptible to environmental factors. This was recognized in 1990 by the Convention on the Rights of the Child and the Declaration of the World Summit for Children. The effectiveness of both these instruments can be greatly strengthened by new commitments from world leaders in the Earth Charter.

Agenda 21, the Earth Summit's detailed plan for major actions on environment and development into the next century, will contain several important elements directly relevant to UNICEF — in such fields as health, water and sanitation, and education. The real goal of UNCED is to make this plan work by increasing capacities — technological, financial, institutional and human — for environmentally sound development. Virtually all environmental issues have their origins in the failures or inadequacies of the development process. At the heart of increasing all these capacities, as UNICEF well understands, is the need to develop human resources which Agenda 21 must reflect.

2. A 'people-centred' approach to development: the great lesson of development is that people must be involved in their own development. Development is for people, not the other way around. Environmental improvement must involve every person on Earth, and it must start at a level which is meaningful to children, youth and women — which means at the household and community level where people can protect and improve their own environment.

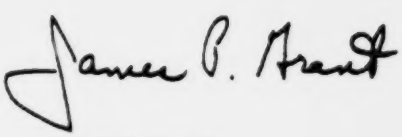
UNICEF assistance has long included several environmental components. UNICEF is advocating to the Earth Summit that two of these are particularly vital: improving the overall situation of women, who are the critical agents for development, and adopting a 'primary environmental care' approach to 'sustainable, people-centred development'.

Young people are also the most aware supporters of pro-environmental thinking and 'the harshest critics of the planet's present management.' If they are allowed to participate, their energy and vision will be an enormous resource for protecting and preserving the environment.

3. 'People power' for the Earth Summit: awareness is the first step to change and positive action. The outcome of the Earth Summit should be affected, and implemented, by millions of people and organizations around the world. With environmental issues, we are all global citizens and we must all be informed about what needs to be done. Alongside the official Conference in Rio, there is the unofficial Global Forum to express the views of the world's peoples on environment and development. There are already thousands of activities taking place to make sure that the peoples' voices reach Rio, like the Children's Hearings, the voyage of the Viking ship, *Gaia*, and the Earth Pledge

programmes. There should be millions more in every country, every community and every home.

Please use the information in this kit to take your own actions for children, the environment and human development — before, during and after the Earth Summit.



James P. Grant
Executive Director
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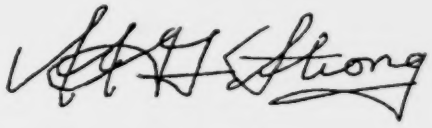

Maurice F. Strong
Secretary-General
UNCED

Environment: the children crisis

Lloyd Timberlake and Laura Thomas explain how the deaths of 14 million children a year are a critical environmental concern for world leaders at the 1992 Earth Summit. Laura Thomas is a writer and activist who has campaigned for freedom of information and lead-free air. Lloyd Timberlake, a director of the International Institute for Environment and Development, helped write the 1989 report 'Children and the Environment', published by UNICEF and the United Nations Environment Programme (UNEP).

"States Parties recognize that every child has the inherent right to life . . . States Parties shall ensure to the maximum extent possible the survival and development of the child." — Article 6 of the Convention on the Rights of the Child

Every year, 14 million children under the age of five die in the developing world, not in a drought and famine year, but in an 'ordinary' year. Everyone talks of the 'environment crisis' and the 'population crisis'; most people have heard of the 'debt crisis'. But who ever speaks of the 'children crisis'? It is as if these deaths have become an acceptable, muted and natural background noise amid the louder workings of the world: buying, selling, trading, producing, governing, defending and the general creation of wealth.

In one sense, most of these deaths can be linked to the environment. Four million children die of diarrhoeal diseases, usually associated with bad water and contaminated food. Over five million die of diseases such as tetanus, whooping cough, measles and respiratory infections, all caused by microbes that are as 'natural' and long-established in the human environment as the elephant or the oak. One million die of malaria, carried by another natural species, the mosquito. Others die of mixes of causes — often malnutrition and worms, which make young bodies vulnerable to opportunistic bacteria and viruses. Many of the most chronically malnourished children are in the care of parents who can no longer grow enough to eat in their overused, bankrupt environments.

But in a more important sense, to describe these deaths as 'environmental' is criminally misleading. The children are all the victims of political choices, and most of the remedies for their fatal conditions are absurdly cheap. If the world spent a fraction as much time and money on keeping children alive and managing the environment as it spends on arms, then the majority of children in jeopardy would survive, most forests could be saved and deserts could be kept in place.

The children's deaths and environmental destruction are also caused by the 'crisis of underdevelopment'. This is not a crisis in the sense of an acute shock, but a chronic condition which has afflicted most nations for as long as they have been independent. It too has roots in political choices. The wealthy European and North American nations have constructed an international economic system under which the rich countries get richer much faster than do most of the poor countries.

Northern governments are slowly beginning to insist that the cost of the environmental damage caused by Northern manufacturing be included in the cost of their products. This is the 'polluter pays principle'. But the governments of the poorer Southern nations cannot charge Northern purchasers the cost of the environmental destruction caused by the production of lumber, cotton, sugar, peanuts, beef, tea, coffee and cocoa. So the poor South is subsidizing the rich North in selling these products, because the South assumes the costs of environmental destruction, costs which must be paid, initially by children alive today in those countries and then by future generations. Eventually, everyone everywhere will pay for the loss of tropical forests and topsoil.

The most obvious and most discussed sign of these politics of impoverishment is the debt crisis. During the four years of the Marshall Plan following the Second World War, the United States sent 2 per cent of the wealth it produced every year to Europe to help it rebuild. For much of the 1980s, the indebted nations of Latin America and Africa have been sending twice that amount, in terms of a percentage of their own gross national products (GNP) to the rich Northern nations every year, just to pay their debts.

Aid from most Northern nations has never amounted to more than a fraction of 1 per cent of GNP. Today the poor nations are shipping much more money to the rich nations than they get in return — through aid or in any other way.

The debt crisis means that Third World children are getting less to eat, less education and less health care. In many countries, the progress in keeping children alive achieved by vaccination and better nutrition is being reversed. Children are paying their nations' debts with their futures. This is policy. Nations are paying these debts with their environmental resources, squandering topsoil, water and forests to raise hard cash.

So every day, members of parliaments and senates around the world, North and South, and members of government cabinets, North and South, are sitting down, receiving expert advice, debating, and deciding policies that guarantee that 14 million children will die and that nations will sink into environmental bankruptcy. The planet and those who live on it have come to a peculiar pass.

The new ethic

There has been little recent change in humankind's ways of looking at children, but considerable change in its views of the environment.

For years we have kept the environment in a 'policy ghetto', with some of those most concerned about the environment the most responsible. The very idea of 'protecting the

environment' suggests that human progress can somehow be kept separate from the human environment, the environment is a separate, sacred place; hands off. This has never been true in human history and never will be true.

All human progress or lack of it is based, ultimately, on use and misuse of the environment. It has traditionally provided clean water, clean air and protection against the sun's most harmful rays. It has provided a predictable climate for agriculture, adequate soil and water, and other natural resources. The ways in which human societies have chosen to develop — policies again — mean that the continued supply of these services can no longer be guaranteed. And there are three more people, all of whom need them, added each second to the world's population.

It is not just that 'the environment' has become more important as a political issue. The change has been much more profound. We have come to realize, finally, that we cannot progress in ways which destroy the environment, as the environment is the basis of all progress. So the very nature and meaning of progress have become important political issues. Concern for the needs of future generations is beginning to guide us in the use of resources and the use of the environment. We must, we are told, live today not only so that we meet our own needs, but so that we leave behind adequate resources. Future technology may help future generations use resources more efficiently, but bigger populations will almost certainly see to it that our progeny require more resources.

The fatal flaw in this reasoning is that policy makers and people in general have never been required to concern themselves logically, mathematically, economically and politically with the needs of future generations. Given the apparently limitless bounty of the environment, any wealth creation at a given time was seen to be wealth creation for the future, which would also have infinite resources.

So, from almost a standing start, political leaders are trying to find ways of investing taxpayers' money in the needs of next century's taxpayers — while at the same time trying to win the next election. Jurists are trying to establish legal principles which will guarantee a sort of equity between this generation and future generations. Economists, who have always discounted future against present benefits, are trying to find ways of spreading their spreadsheets wide enough to cover future needs.

If our main guide in the rational management of the environment is to be the needs of future generations, then — based on present practices — we have very little chance of ever managing our environment wisely. To reach this conclusion, one need not peer far into the future. Look instead at how we meet the needs of the very next 'future generation', the large flesh-and-blood generation which lives in our midst today: the children of the world. The 14 million deaths each year, the systematic ways in which children's lives are destroyed as governments strive to pay and to collect debts, the low priority given to the needs of children in many wealthy countries, do not inspire confidence that we can meet any future needs.

Policy makers cannot make rational policies for future generations unless they can

make rational policies for today's children. So all the threats to children, and all the abuses they suffer, provide a measure of this generation's ability to provide for the needs, including the environmental needs, of future people. And this generation is not measuring up.

The next generation

There is no agreed international definition of a 'child'. The Convention on the Rights of the Child sets the upper age at 18, unless national laws set a different age for 'majority', although children of 15 and above are declared old enough to fight in wars. UNICEF tends to define those under 16 as children.

Today, about one third of the planet's population is under the age of 16. The vast majority of these children, over 85 per cent, live in the developing world. Asia alone — with over 1 billion children — has as many children as China has people. Asia also has half of the world's children who live in absolute poverty.

Europe (excluding the Soviet Union) has 49 million more people than Latin America, but Latin America, because of its rapid population growth rates, has 66 million more children than Europe.

So sheer numbers — and population growth rates are also associated with governments' policies — make it harder for the Third World to care for its children. Nine tenths of all future population growth is expected to take place in the developing nations.

The regions where most of the world's children live suffer rapid soil degradation, forest loss and water scarcities. These regions also contain the greatest numbers of wild species of plants and animals, the 'genetic diversity' which is being rapidly wasted, depriving future generations of crops, medicines and chemicals. Natural resources will stand little chance against the needs of millions, unless these needs can be managed.

Global warming and ozone depletion will hit these children-filled regions the hardest. The 'greenhouse' effects are expected to be felt first in terms of a growing number of disasters such as floods, droughts and cyclones, and children always suffer disproportionately in disasters of any kind. More chronic effects will be an increased spread of deserts and deforestation, shrinking harvests and higher levels of malnutrition. The pattern of diseases, many of them most dangerous to children, is expected to change, further burdening already overstretched health-care systems. There is even the fear that increased radiation due to loss of the ozone layer will weaken human immune systems.

Amid all the gloom is evidence of real progress. Vaccinations and a simple sugar-and-salt solution to keep children alive during bouts of diarrhoea are estimated to save 3 million children each year. The technology, even delivering the technology, is cheap. But progress to date is fragile. It relies too much on the supply of technology from outside the societies concerned. The debt crisis is making it hard to maintain this progress, and if the worst fears of global warming and ozone depletion are realized, it could so easily be reversed.

The new coalition

Governments, even the best, have trouble investing in children or the environment because they live only from election to election. Those that do not face elections — the majority of governments — must answer to the demands of a small minority of élites: the military, the civil servants and business interests. Money invested in children and the environment is money invested today which will realize only vague and unreckonable future benefits. More important, many such benefits will go to voters of the future rather than those of today.

The children of government leaders do not suffer from lack of government spending on health care and education. Nor do the children of government leaders suffer the worst effects of environmental destruction. Governments would rather invest against more concrete, traditional threats, such as military attack, despite the diminishing probability of those threats materializing.

So motivation for change must lie outside governments, but it must eventually galvanize them into action. Only they, cooperating with one another as never before in history, can protect humanity against the planetary threats of global warming, ozone depletion and the loss of forests, species and productive lands.

The new concern for the environment, and thus for the future and for children, promises to create a new coalition of concerned citizens. At last, the many single-issue pressure groups can be united under one banner. The environmentalists, those concerned with development for the poorest, women's rights groups, peace campaigners, tribal rights groups, children's rights groups, those concerned with international cooperation: all have a stake in future generations.

This article is extracted from *When the Bough Breaks* (1990), a book to accompany a television documentary of the same name. It may be reprinted with acknowledgement to the authors, Lloyd Timberlake and Laura Thomas, and the publishers, Earthscan Publications, London.

Children at the centre

Lloyd Timberlake and Laura Thomas describe how environmental issues have come onto the political agenda during the last two decades — and why 'sustainable development' brings children into the centre of the environment/development debate. Laura Thomas is a writer and activist who has campaigned for freedom of information and lead-free air. Lloyd Timberlake, a director of the International Institute for Environment and Development, helped write the 1989 report 'Children and the Environment', published by UNICEF and the United Nations Environment Programme (UNEP).

"We borrow environmental capital from future generations with no intention or prospect of repaying. They may damn us for our spendthrift ways, but they can never collect our debt to them." — World Commission on Environment and Development

Children are beginning to muscle their way into the centre of the debate on how to manage the environment. They and their well-being increasingly provide a report card on how humankind is progressing in its attempts to preserve the planet for all future generations.

Few have noticed this, largely because the controversy about the environment in particular and all human progress in general has changed so radically in only a few years. The thinking among scientists and government officials is very different in 1990 from what it was in 1985. Problems like global warming, the hole in the ozone layer, acid rain, and the loss of rain forests and their plants and animals have all meant that the environment has stopped being the concern only of the 'environmentalists' and has become a real concern, finally, of politicians.

Any attempt to make this concern rational must focus on the welfare of future generations and, thus, must concentrate on children. The 1990s will see a wave of reports, books, articles, television programmes and conferences on children and the environment.

To understand this shift in perception, it is necessary to look back to the first wave of environmental anguish and action in the late 1960s and early 1970s.

That wave was set rolling mainly by rich people in rich countries. The radical youth of the 1960s used environmental destruction as one weapon with which to attack 'the

Establishment'. But older people with the leisure time to ramble in the countryside, to watch birds, to hunt ducks and to go boating also noticed that all the industrial progress which had paid for their leisure was destroying the countryside in which they liked to spend it.

Most of the early worry was local: polluted rivers and lakes, dirty air, urban blight, birds being poisoned by pesticides. But as the evidence mounted, concern became national and then international: global warming and ozone depletion (even back then), acid rain, vanishing species and dirty oceans. Many nations passed clean air and clean water acts; Ministries of the Environment sprang up around the world. In 1972, the Earth's governments gathered in Stockholm for one of the first big global conferences on a single issue: the United Nations Conference on the Human Environment. It was also in 1972 that the Club of Rome published its grim report *Limits to Growth*, which used computer projections to show that human progress would soon be limited by pollution and a lack of natural resources.

The poorer countries came along to Stockholm, but were largely unconvinced. They felt that they had too much unspoiled environment and not nearly enough economic progress. After all, Britain had cleared nearly all its forests and the United States had ploughed all its virgin prairie to make way for farming. Europe and North America had polluted their water and air to manufacture things their people wanted. Were others to be denied similar 'progress'? The developing countries were worried that aid-giving nations would actually stop giving aid for power stations and ranches in the name of the environment. "Give us some of your pollution, as long as we can have the industry that goes with it," a Brazilian delegate to Stockholm was quoted as saying — not from the podium, but in the corridors.

In the North, voter pressure, media attention and campaigns by green groups encouraged new laws which led to improvements. The air became more breathable in most cities; lakes and rivers were cleaned up. Some nations, such as the United States, began to take lead out of petrol.

By 1982, speeches celebrating the tenth anniversary of the Stockholm conference praised the industrialized nations' progress in cleaning up. There emerged the vague notion among ordinary citizens that the environment was somehow under control. This was accompanied by the equally vague and much more dangerous notion that the environment could always be cleaned up, whenever governments were ready, once the time to clean it up had rolled around.

But at precisely the same time, two new types of concerns were emerging which painted a darker picture. First, those same tenth anniversary speeches by the experts said that while the North had achieved some progress, the focus of environmental damage had shifted southward into the developing world. Tropical forests were vanishing, particularly in Latin America and Asia, to make way for unproductive and unprofitable farms and ranches. Good land was being turned into unproductive desert through misuse and overuse, particularly in Africa. The droughts and famines of 1984-

86 across Africa showed that this was a human, more than an environmental, tragedy. Gradually leaders both inside and outside the affected nations began to see this destruction as dampening hopes for economic progress in the mainly agricultural South. They also saw that genetic diversity, with its promise of new medicines and crop species, was being lost with the forests, and this loss affected the whole world.

Second, the rich nations began to grow more and more worried about international threats like acid rain, global warming and ozone loss. The scientific data on these threats had been poor at the time of Stockholm. While there had been some progress on national pollution by 1982, there had been no real progress on the global issues. And governments were beginning to see that there could be no progress without international cooperation.

The World Commission

With these developments in mind, in late 1983 the United Nations established an independent commission. Its brief was ambitious. It was supposed, among other things, to "propose long-term environmental strategies for achieving sustainable development by the year 2000 and beyond" and to "recommend ways concern for the environment could be translated into greater cooperation among developing countries and between countries at different stages of social and economic development" (that is, between the Rich and the Poor).

The United Nations appointed a unique politician to head this new World Commission on Environment and Development. Gro Harlem Brundtland had been Environment Minister of Norway, and from that post she had gone on to become Prime Minister. She likes to claim that she is the only politician ever to rise from the traditionally thankless and dead-end job of the environment portfolio to lead a nation, and that this gives her an insight most political leaders lack. Even more important for the purposes of the new Commission, she had lost the Prime Minister's job and had time to devote to the Commission.

In 1986, in the middle of the Commission's work, she became Prime Minister again, which forced greater respect from other countries for her and her Commission as they travelled the globe studying the situation. It is also worth noting, given the effect that her Commission's report has had on the issue of children's welfare, that Brundtland was trained as a paediatrician and a professional in children's public health.

Unlike previous commissions, such as Willy Brandt's (former Chancellor of West Germany) on North-South issues and the late Prime Minister of Sweden Olof Palme's on security and disarmament, this group held public hearings on five continents, listening to farmers and rubber tappers and leaders of citizen's groups, as well as to scientists.

They published their final report, *Our Common Future*, in early 1987 and presented it to the United Nations General Assembly in October of that year — on the same Monday morning that the New York stock market crashed, a coincidence which meant that the presentation and all the fine speeches by heads of State on the day got almost no coverage by the media.

At the same time, UNEP presented to the General Assembly a very similar report, *Environmental Perspective to the Year 2000 and Beyond*, containing parallel conclusions. The World Commission, though established by the United Nations, was not a United Nations commission; it was 'independent' and its views were supposed to represent the independent conclusions of the Commissioners, not necessarily of their Governments. By presenting its own report, UNEP produced an official United Nations document to which there had to be an official response. There were resolutions passed in late 1987 hailing both reports as the way forward for the United Nations system in particular and for all governments in general.

We can't go on this way

Our Common Future is written in the cautious language one might expect of a unanimous report by 22 senior bureaucrats. It is this caution and the fact that it was unanimous that gives it such power. For hidden in the careful language are startling conclusions — startling not because they were new, but because of the nature of the people who were saying them.

The most startling of these was that the ways in which we are doing many basic things — producing energy, growing food, manufacturing goods, protecting wild species — offer little hope for the future. They are *unsustainable*, we cannot keep doing things the way we are and hope to hand over a safe and sound world to our descendants. Environmentalists have been saying this for years: in *Our Common Future*, people with real power and real responsibilities began to say it too, in unison, and for the first time. Energy offers one of many examples. In the early 1980s, the world population of almost 5 billion was annually consuming energy equivalent to the burning of 10 billion tons of coal. Most of it came from fossil fuels such as coal, oil and gas, and — in the South — wood and charcoal. This level of consumption is slowly warming the planet, producing acid rain in Europe and North America, and accelerating deforestation in the tropics.

If present energy use per person were to remain constant, then a world of 8.2 billion people in the year 2025 would need the equivalent of 14 billion tons of coal, over 4 billion in the South and over 9 billion in the North.

But this projection is based on present consumption rates, heavily biased towards the North. What about 'development', giving the South, where three quarters of the world's people live, a fairer share? If the people of the South began to consume energy at the same rate per person as the people of the North, then by 2025 the world would need energy equivalent to the burning of 55 billion tons of coal. Clearly, neither the atmosphere nor the people could stand the pollution produced by such energy consumption. This sort of back-of-envelope calculation leads to a choice between two conclusions. Either the 'developing world' can never develop in the way in which it has always expected to, that is, by catching up with the North in terms of cars, fridges, lights, factories and power plants; or new forms of energy production are needed.

So it is small wonder that the major theme running through the Commission's 400-page report was 'sustainability' or 'sustainable development'. How can we begin to make genuine progress, to realize human needs and human wants, in ways that are sustain-

able and that offer the planet a hopeful future? The Commissioners were never happy with the term 'sustainable development', because it seemed to imply a prescription for the 'developing' world, rather than for the whole world. But they comforted themselves with the notion that all nations, even the richest, are still developing in one direction or another; so 'sustainable development' should really be thought of as 'sustainable human progress'.

Focus on future people

Taking a general, global view and not wanting to offer a blueprint for individual nations, the Commissioners defined 'sustainable development' in only the most general, global terms: "It meets the needs of the present without compromising the ability of future generations to meet their own needs."

'Sustainable development' is hardly a riveting battle cry. It lacks the zest of such slogans as 'Liberty!' or 'Equality!'. It is also vague. What does it really mean in terms of day-to-day activities? But in a few years it has had the effect of taking concern for the environment out of the green ghetto, and has brought economists, political scientists, sociologists and industrialists into the debate. Along with the thinking behind it, the concept of sustainable development has convinced many previously doubtful people that concern for human progress and concern for the environment cannot be separated.

"In an important sense, there has turned out to be more to the notion of sustainable development than even the wise members of the World Commission intended," wrote Professor William Clark of Harvard University. "Individuals, organizations and entire nations have taken the concept as a point of departure for rethinking their interactions with the global environment."

But the Commission's definition, based on the needs of future generations, presents a huge and as yet little-discussed challenge to humanity. It also puts children at the centre of the whole environment/development debate.

We are asked to conduct our present affairs with one eye on the needs of future generations. But we have never had to do that before. Despite set-backs such as the Black Death and world wars, there has long existed in the collective human consciousness the idea of a benign progress. Developments in science, technology and medicine were seen to be producing a safer, more comfortable world. This optimism was particularly strong during the rebuilding period after the Second World War. Recessions were seen as temporary dips on an upward curve. Concern for future generations has been limited to educating and providing for our children so that they would be well placed to use the fruits of progress.

It is only relatively recently, perhaps first seen in fears of global destruction by nuclear weapons, that this faith in progress on the part of ordinary people has begun to flag. The growing awareness of both increasing world poverty and environmental destruction has played a part. The mavericks and poets noticed first. The social critic Lewis Mumford wrote: "Today, the notion of progress in a single line without goal or limit seems perhaps

the most parochial notion of a very parochial century." The Argentinian writer Jorge Luis Borges maintained: "We have stopped believing in progress. What progress that is!"

Present threats to global ecosystems have raised the fear that not only are we not progressing towards a more comfortable world, but we are creating a dangerous and unpredictable world for our progeny. Humanity has never faced this prospect before. According to *Our Common Future*: "When the century began, neither human numbers nor technology had the power to radically alter planetary systems. As the century closed, not only do vastly increased human numbers and their activities have that power, but major, unintended changes are occurring in the atmosphere, in soils, in waters, among plants and animals, and in the relationships among all of these."

So we are told that we are destroying the world as we and our forebears have known it, a world for which our activities seemed so well designed, and creating a perilous and unpredictable world in which our present methods of producing wealth are unlikely to prosper. And we are told that the only way out, the only rational guideline we have to follow, is to commit ourselves to the needs of future generations. Without that concern for future people, we have no reason to stop living as we do.

But we have no practice in such concern, we have no institutions that represent future generations; they have no voice in our deliberations. The Commissioners themselves, all coming from the world's premier political and economic institutions, admitted that the rapid rate of change "is frustrating the attempts of political and economic institutions, which evolved in a different, more fragmented world, to adapt and cope." This admission also leads to a choice between two difficult conclusions: either humankind's political and economic institutions must adapt themselves and their decisions to the new reality, or humankind will suffer disastrously. 'Future generations' is a vague and abstract notion. Who has any vision of the world in which our great-great-grandchildren will live, or how they will live in it? But we need not look that far ahead.

Today's toddlers will only be middle-aged by the year 2030. That is the year by which all the various greenhouse gases in the atmosphere are expected to have an effect equal to a doubling of the carbon dioxide concentration present before the Industrial Revolution. That doubling is expected to increase global temperatures, raise sea-levels and result in more droughts, floods, storms, cyclones and general social disruption.

The notion of sustainable development brings children into the centre of the environment/development debate. The needs of children alive today for a safe environment are not being met. They may be the first real 'greenhouse generation'. Their own children, our grandchildren, will be particularly at risk. The immature of the species *Homo sapiens*, like the immature of any species, are the most vulnerable to sudden shocks and changes. They suffer most and first from environmental degradation, and their suffering will deepen as these changes accelerate.

The World Commission wrote: "We borrow environmental capital from future generations with no intention or prospect of repaying. They may damn us for our

spendthrift ways, but they can never collect our debt to them. We act as we do because we can get away with it: future generations do not vote; they have no political or financial power; they cannot challenge our decisions. But the results of the present profligacy are rapidly closing the options for future generations. Most of today's decision makers will be dead before the planet feels the heavier effects of acid precipitation, global warming, ozone depletion, or widespread desertification and species loss. Most of the young voters of today will still be alive."

However, it is not just children's environmental welfare but children's overall welfare which becomes the standard by which we may judge our ability to achieve sustainable development.

In children alive today, we have among us the first representatives of the future generations which underpin the notion of sustainable development. Any evidence that we undervalue them is evidence that we undervalue our future as a species on Earth. Thus, evidence that we cannot care for them is evidence that we cannot care for our environment.

Such evidence abounds. In times of economic hardship, we cut back on education and health care for the poorest children. We exploit them, commercially and sexually. Some nations use them to fight their wars. We allow them to roam homeless in our cities. The most damning evidence against us is the fact of the 14 million children under the age of five who die every year in the Third World — deaths that could relatively easily and cheaply be prevented.

If we cannot build the needs of millions of children into our political, economic and social systems, we have little chance of meeting our own and our descendants' needs for a sustaining and sustainable environment.

Outrage is a powerful weapon for political change, and outrage is easy where children's suffering is involved. But outrage is usually short-lived. Love is more powerful and more lasting. Yet, try as we might, it is hard to love the planet and future generations in the abstract. Love of children comes more naturally. Children, as they become the focal point of the environment and development debate, can strengthen our resolve to make the difficult political choices necessary to sustain human life on earth.

This article is extracted from *When the Bough Breaks* (1990), a book to accompany a television documentary of the same name. It may be reprinted with acknowledgement to the authors, Lloyd Timberlake and Laura Thomas, and the publishers, Earthscan Publications, London.

Why the Earth Charter must consider children

Philip Alston is Director of the Centre for International and Public Law at the Australian National University in Canberra. He was one of the key figures in securing the Convention on the Rights of the Child as an international legal instrument. He examines here the arguments why children's well-being should be addressed in the Earth Charter to be adopted by United Nations Conference on Environment and Development (UNCED).

The world has shown that it needs — or at least its leaders and its media need — a narrow focus on particular problems if solutions are to be generated. In 1990 the World Summit for Children generated intense interest and political commitments at the highest levels. In June 1992 it will be the turn of the environment.

The 1992 Earth Summit, as UNCED is known, will deal with a cluster of critical issues, one of which must be children and the environment.

"Why bring in children yet again?", we hear the sceptics ask. Why should children and their problems and aspirations be dealt with specifically at the Earth Summit? We adults face the same problems, but we don't make 'adults and the environment' a separate issue. In other words, children are people too. And children don't need more empty words: they need action.

Such arguments will be heard with increasing frequency as we approach the Earth Summit and as various concerns jockey to be taken on board. It is therefore of the utmost importance that we examine them carefully before accepting or rejecting them. In essence there are two issues: why should children be singled out for special treatment, and what practical value does the whole exercise have?

There are many very good reasons why the Earth Summit must address children's issues in their own right. Children are often centrally affected by, and even bear the main brunt of, environmental disasters like Chernobyl and Bhopal. Some of the catastrophic consequences of these disasters are already well documented, while others are still awaited with dread. Of all the casualties, known and yet unknown, children are clearly among the most prominent.

But these are just the 'loud' environmental emergencies. The 'silent' ones often pose even more direct threats — not only to children's development but to their very survival.

Air and water pollution, exposure to toxic chemicals and other hazardous substances, and environmental degradation in the form of soil erosion, desertification and other factors all have a major and often wholly disproportionate impact on children. The 1990 report published by UNICEF and the United Nations Environment Programme (UNEP), *Children and the Environment*, documented these appalling realities. Today's environmental threats to children are so significant and ubiquitous that overall solutions must be carefully crafted with children specifically in mind.

But, our sceptic might ask, why should children be singled out, when so many other groups are also vulnerable? After all, how can we list every group or watch out for every special interest in the Earth Charter?

There is a striking parallel between such sentiments and the arguments often heard in the late 1970s when it was proposed that a separate human rights treaty was needed to address the situation of children.

Among the very clear lessons to emerge from the drafting of the Convention on the Rights of the Child were that children's needs *do* differ considerably from those of adults and that their particular needs are often ignored if they are not specifically identified and addressed. The unprecedented number of ratifications of the Convention and the rate at which they have been achieved attest to the near-universal support for these views on children's needs.

Thus, in the human rights field, it has been accepted that recognizing the rights of children to special protection because of their vulnerability might amount to little more than a token gesture unless it is reinforced by carefully targeted and specifically tailored measures. The same is true in the environmental context. Children are not just an interest group, nor are they a resource. Children are our future.

It is not by chance then that an almost identical theme — concern and planning for the future — has become the *leitmotiv* of discussions about the proposed Earth Charter. The key phrase is 'environmentally sustainable development', originating in the work of UNEP and especially the Brundtland Commission (the World Commission on Environment and Development). By definition, development is not sustainable if it compromises 'the ability of future generations to meet their own needs'.

Similarly, there has been widespread acceptance of the 'precautionary principle'. This holds that environmental measures must seek to anticipate problems before they occur and that it is unacceptable to wait until irrefutable evidence is available before acting.

The principle of 'intergenerational equity' also underlines the importance of looking to children and to the future. The present generation should ensure that the next generation is left with an environment at least as healthy, diverse and productive as the one experienced by the present generation.

Thus, several accepted principles say that children's interests must be protected.

They must, therefore, be very high on the environmental agenda.

Through the Earth Charter the world community must also integrate approaches to its different priorities. We cannot treat issues such as children, human rights, the environment, demilitarization, drugs and so on as though they are 'flavours of the month', to be discarded or forgotten as we move on to the next fad. These issues are inherently interdependent and cannot be isolated into different compartments and treated separately.

The 1990 World Declaration on the Survival, Protection and Development of Children, agreed on at the World Summit for Children, clearly recognized this point in relation to various issues, including the environment. 'Degradation of the environment' and the 'lack of sustainable growth' in many countries were identified as major challenges. Accordingly, the world's leaders solemnly undertook "to work for common measures for the protection of the environment, at all levels, so that all children can enjoy a safer and healthier future."

The Earth Summit must acknowledge the central importance of the nexus between children and the environment and also seek to adopt an integrated approach.

But, our sceptic persists, what does it matter if the Earth Charter talks about children or not? Factory managers and entrepreneurs don't consult international declarations. And even if they knew that such standards existed they probably could never get hold of them.

It is true that real needs are sometimes neglected at the expense of developing sophisticated policy formulations which are ultimately ignored. In the human rights area such problems are well known. But this has been very far from the case with international action on behalf of children. Rather, it has been increasingly recognized that development activities, no matter how effective, need to be reinforced or supplemented by appropriate policy commitments at all levels.

At the international level there are many ways in which to generate pressure in favour of such changes. Experience with the 1972 Stockholm Declaration on the Human Environment and with the World Declaration and Plan of Action adopted by the Summit for Children demonstrates that such high-level policy statements can provide the framework for, and can decisively influence the approach to, a wide range of subsequent activities.

Heads of State or Government may or may not be deeply committed personally to the goals they espouse at summits, but sooner or later (and usually sooner) their peoples will ensure that they are held accountable to those very principles.

The winds of change sweeping the world in the past few years are decisively in favour of democracy, ecological sustainability and protection for the vulnerable. As a result, the well-being of children can simply not be left out of any charter that purports to be in tune with our times.

UNCED: why people matter

Koy Thompson, of the International Institute for Environment and Development (IIED) in London, is a member of the British delegation to the United Nations Conference on Environment and Development (UNCED). He is also active in non-governmental organization (NGO) activities for UNCED and wrote 'UNCED: A User's Guide', an Earthscan Publications briefing booklet. A physiological ecologist, he undertakes policy studies at IIED, the independent institute founded by Barbara Ward, who coined the phrase 'Only One Earth,' at the 1972 World Environment Conference in Stockholm. His review here of the progress and prospects of UNCED was edited from an interview with Ginna Lewis of the 'Freely Speaking' programme, Radio 74, Geneva.

Governments and the United Nations system have a lot of work to do to deliver on the promises and aspirations for a safe and secure planet and sustainable livelihoods for all its people. But there is progress.

UNCED is not an ordinary conference on an issue like trade, for example, which the UN has dealt with for a long time. We're trying to move environment to the top of the political agenda. Although there's a lot of rhetoric about it being there, it's still down at the bottom.

We're dealing with new ideas, such as environmental economics, integrating the environment into all areas of economics and social decision making. This is brand new and people don't know how to go about it. We're also dealing with the environment in a way which puts development first, particularly the development needs of poor people all around the planet.

In the past we saw environment as something aside, even as something which might threaten the development needs of people: we talked about parks and reserves and possible conflicts between protecting the environment and meeting people's needs.

Now there's a much clearer understanding that you can only protect and care for the environment if the basic needs and livelihoods of ordinary people are met. The environment is, after all, the livelihood base for people on this planet, the economic base. It's the integration of environment into decision-making that is so difficult for governments to come to grips with.

The key point is that all these discussions at UNCED are going on, from the point of the South countries, against the background of a very inequitable trading system and inequitable financial flows on debt payments. There's a lot of debate about compensation for the poorer countries forgoing immediate gains — such as export revenue from cutting down forests — to protect the global environment. And the Northern countries, it might be said, are only interested because when global warming happens it's going to affect us all.

The fact is that the adjustments in economies and political systems which are required to move towards a sustainable future are going to require extra resources. There's no doubt about it in the long term. There has to be a lot more social spending, on environmental divisions and on development generally, targeting the very poorest groups.

Any negotiation usually comes down to money. But in the corridors and behind the scenes at UNCED there's a lot of very useful discussion: about accountability to people, about more plural societies and about the national and international equity which must come about to allow better resource management.

There are actions which have to be taken in the North for sustainable development. We have to cut back on consumption. We have to find much more efficient ways to use and conserve energy and raw materials, to organize transport.

But looking at the world in North-South terms disintegrates things. We need a different kind of UN thinking, going beyond North and South: it has to be based on partnership and on countries being able to voice problems without feeling they will be loaded with a whole new set of conditions on trade and debt.

Some issues simply can't be dealt with in this kind of forum at the international level, which is very 'top down'. As ordinary citizens we have to concentrate on bringing about societies in which ordinary people are empowered to discuss these problems. We have to ask what is preventing people from becoming organized — and what is preventing them from having governments that are accountable.

This level of the ordinary citizen may not seem very connected to international factors. But by and large it is. When an indebted country makes a deal on debt, for example, it is usually conditional upon adjustment of the economy, structural adjustment. Quite often that adjustment has to happen, but it hits hard at spending on social services, on environmental departments and on all those institutions which are likely to help facilitate accountability at a more local level. I'm not excusing these countries, but these international factors make it much less likely that there will be broader-based, 'bottom up' participation, in which real problems can be discussed frankly and honestly.

I'm in favour of a new kind of UN in which partnership is talked of seriously and in which the UN represents the people. Maybe, just maybe, this conference will get

governments to put aside national interest and talk about the common goal, the common good.

Ordinary people in all countries should have the last word. It's the vision of Maurice Strong, the UNCED Secretary-General, that NGOs, which are supposed to represent the wider needs and concerns of the people, should be involved right from the start. The national reports to UNCED, feeding into Agenda 21, should have been put together with the input of citizens groups, NGOs, etc. At UNCED meetings there's a procedure for NGOs to make presentations and there's a whole parallel process running, nationally and regionally. But it's happening on the periphery. This is really a continual political struggle that's only really resolvable at the national level. But ideally the people should be there.

Environmental solutions are all to do with long-term planning. But ordinary people are often forced to look at their short-term needs for reasons of survival. Industry is similar: they have to face this year's problems, this year's shareholders and this year's profits. Shareholders won't like it if there's no profit this year because their company started investing in a 20-year plan 'for the sake of the planet'. This is a fact of life. It needs a sea change in perception and in values, with action from all the players.

In poor countries, poverty is both cause and effect of environmental degradation. There's a downward spiral in which peoples' opportunities and choices are steadily taken away. Because of their survival needs they have no choice but to degrade the environment on which they depend. To break out of that spiral you have to raise incomes or present choices for the poor. That said, there is no guarantee that the upward spiral of raised incomes will guarantee environmental protection. What you have to talk about is the wider national framework for ensuring all those bits and pieces which provide incentives for local communities and ordinary people to protect their environment. But first you've got to help them meet their needs. You have to empower the communities to be able to define their own needs, their own problems and their own solutions. That's all to do with land tenure, land security and having a stake in the future so that communities will protect their environment and think about future generations.

What flows from that is care for the environment cnd this has been called 'primary environmental care'. This is an approach which has the community level *inform* what actions have to be taken to support that nationally and internationally. It's a good approach and one that should be developed during UNCED. Then you deal with the upward spiral and the downward spiral at the same time.

The people's road to Rio

Ricardo Bayon, editor of 'Network '92', published by the Centre For Our Common Future to report on progress towards the Earth Summit, outlines opportunities for individual participation in the United Nations Conference on Environment and Development (UNCED).*

The first United Nations Conference on the Human Environment was held in Stockholm in 1972. A decade later, the World Commission on Environment and Development (WCED), also known as the Brundtland Commission, attempted to reconcile environment and development to show that these two issues must be tackled in tandem or the effort would be wasted.

In many ways, WCED contributed to the 'D' in UNCED, the upcoming United Nations Conference on Environment and Development, also called the Earth Summit.

The linkages between environment and development may cause the UNCED process to trip, as occurred in Stockholm. Yet, that 1972 conference and WCED are major steps towards placing the environment on the world's political agenda. It is partly this new-found political concern that has made the Earth Summit possible.

The real difference between Stockholm and UNCED is that levels of participation and public awareness on environment and development problems are now much greater.

In Stockholm, people drove the process from the outside. In Rio de Janeiro, people will have the unique opportunity of driving this global United Nations process from inside, as well as outside. The real breakthrough at the Earth Summit may well be the establishment of a new way of conducting global politics.

UNCED is giving people — non-governmental organizations (NGOs), youth groups, groups of indigenous peoples, women's groups, trade unions and other independent sectors of society — the opportunity to fuel the motor for change.

This is taking place at two levels: internationally, through the UNCED secretariat and the meetings of the Preparatory Committee for UNCED (PrepCom); and nationally, through governments and their delegations to the Conference.

Outside the official process, people, NGOs and other independent sectors of society

are also at work, formulating their own agendas, providing their own solutions and feeding into the UNCED process in myriad ways.

Both approaches have their benefits and their drawbacks, and both are necessary and equally important. And, please keep in mind, it is still possible to influence the Earth Summit both from within and without.

From the inside, internationally

After the General Assembly decided to hold UNCED, it created a secretariat and a PrepCom to do the official preparatory work. The United Nations put Maurice Strong, the Canadian businessman-cum-environmentalist who was also in charge of the Stockholm conference, in charge of the UNCED secretariat. The PrepCom chairmanship went to the experienced diplomat of Singapore, Tommy Koh.

It was also decided that part of the Summit's outcome should be two important conventions, one on the topic of climate change and the other on biodiversity, to be negotiated separately.

Thus there are four major focal points at the international level: the UNCED secretariat, PrepCom and its meetings, the negotiating process for a convention on climate change, and the negotiating process for a convention on biodiversity.

The UNCED secretariat is in Geneva, where Strong has assembled a small team of experts to undertake the Herculean task of preparing the documentation requested by PrepCom and all the research required for UNCED. Although under the General Assembly's control, the secretariat has a significant effect on the direction UNCED will take. So, influencing the secretariat is an important part of fueling the UNCED process from the inside.

To do this, it is important to remember that the secretariat has a lot of work on its hands and, as a result, is generally open to letting other people and NGOs take a share of the load. Every day the secretariat receives papers, suggestions and materials from people all over the world. Just sending a paper to the UNCED secretariat does not assure that it will be used, but it does mean that your views have a strong possibility of being considered.

Another, less well-known avenue into the secretariat's work is through the so-called working parties. Because of its workload and because no one is an expert on everything, the secretariat has subcontracted part of its work to experts on certain issues who help prepare papers for PrepCom meetings. Thus, these experts are also influencing the agenda, contents and direction of the Earth Summit. To date, nobody has compiled a comprehensive list of the issues and members of the secretariat's expert working parties. (For a provisional 'Who's Who in the Working Parties', see issue No. 8, July, of *Network '92*.)

The secretariat can also be reached by attending and lobbying the PrepCom

meetings. Many hundreds of NGOs and other unofficial representatives have attended the first three meetings.

PrepCom has the task of negotiating and making decisions on the issues of the Earth Summit. In fact, most substantive issues will have been negotiated before UNCED convenes.

Therefore, to affect the official UNCED process at the international level, you must affect the fourth and final PrepCom meeting, which will be held in New York from March 2 to April 3, 1992.

Effectively lobbying PrepCom (and the negotiations for the conventions on climate change and biodiversity) means not only attending its meetings, but also knowing exactly what you want to say and to whom. It involves researching the negotiating positions of governments and formulating strategies to influence those positions.

On a more practical level, it means obtaining accreditation to UNCED. To do this you should follow the procedure set by PrepCom to decide whether groups are 'relevant and competent' with respect to the issues on the UNCED agenda. (For more information on accreditation see issue No. 10, September, of *Network '92*.)

The final way to influence the international level is by attending the '92 Global Forum, a massive, non-governmental parallel event in Rio de Janeiro, at which all sectors can express their independent views. While obtaining access to UNCED will be very difficult and of limited value, since most official positions will already have been decided, the Global Forum and its hundreds of events are open to and may attract as many as 20,000 people. The real purpose of being in Rio de Janeiro is to plan and affect what happens afterwards.

From the inside, nationally

Working at the national level to influence the international process may well be the most effective approach.

Every country participating in UNCED has been asked to provide the UNCED secretariat with a report on environment and development at home. The guidelines for the National Reports expressly recommend that countries include non-governmental opinion. Naturally, countries have produced and are producing their National Reports in very different fashions, and they have not necessarily followed the guidelines. (All issues of *Network '92* from No. 5 on have information on National Reports.)

Official national delegations to UNCED can also be influenced. Many countries — including Ecuador, the Netherlands, Norway, Peru, Sweden, the United Kingdom, the United States and others — have included non-governmental members on their official delegations. Non-governmental experts are not usually sent to negotiate on a government's behalf. Consequently, the role of these 'independent' members of official delegations is limited, but their presence has substantially enriched the negotiating processes.

From the outside

In addition to working on the inside there are many more opportunities on the outside. People all around the world are working on many parallel but converging activities that will feed into the Earth Summit.

These activities include the NGO preparatory event (in Paris, December 1991), the youth preparatory activity (in San Jose, Costa Rica, March 1992), the indigenous people's preparatory activity (in Rio de Janeiro a few weeks before UNCED); the list goes on and on.

The number of activities, conferences, exhibitions, initiatives, reports and campaigns geared to the Earth Summit is phenomenal. It is impossible to list them all, let alone keep up with their results. Nevertheless, by contacting local groups and by reading the countless UNCED-related publications that have sprung up all over the world, it is possible to find your 'entry point'.

For example, for those interested in the vital links between environment, development and children, there are several global and local initiatives.

One is the international campaign Voice of the Children, whose motto is 'Speaking Truth to Power.' The campaign is coordinated by the Environment Defence Foundation in Argentina (FUNAM) and the Norwegian Campaign for Environment and Development. Children's Hearings are being held all over the world for children to express their views to political leaders. After these Hearings, a group of children from all over the globe will be taken to Rio de Janeiro, where they will speak directly to the world's leaders at the Earth Summit.

UNICEF has endorsed the Children's Hearings and is also encouraging its network of offices and supporting organizations to join the Earth Pledge campaign, organized by Ecofund in the United States with the official endorsement of UNCED. The organizers are seeking millions of signatures from all over the world to a simple declaration of individual commitment to environmental action. The text of the Pledge is:

> "Recognizing that people's actions towards Nature and each other are the source of growing damage to the environment and resources needed to ensure survival and meet human needs,
> I PLEDGE to act to the best of my ability to help make the Earth a secure and hospitable home for present and future generations."

The Earth Pledge will be presented to the world leaders at UNCED as a message from the world's people.

For the world's youth, there will be a major youth-organized and youth-driven global preparatory meeting in San Jose, Costa Rica in March. And organizations such as the European Youth Forest Action, the Southeast Asian Students' Association, and the Student Environmental Action Coalition (USA) are all planning local and regional campaigns to allow youth to express their views on the topics to be discussed at the Earth Summit.

There are many more specific campaigns and initiatives. Since children are a fundamental part of all the issues on the Earth Summit agenda, essentially every UNCED-related activity is about children. Children are not only the most affected victims of the degradation of the environment, they are also the most poignant arguments in favour of development and the eradication of poverty.

So whether you pull UNCED to success by working on the inside, or whether you push from the outside, it must be made to work. If the Earth Summit doesn't succeed, the children of today and tomorrow will feel the consequences.

* Issues of the *Network '92* newsletter, the quarterly *Brundtland Bulletin* (which also contains detailed information on the UNCED process) and information on the '92 Global Forum can be obtained from the Centre For Our Common Future, Palais Wilson, 52 Rue de Paquis, 1201 Geneva, Switzerland. Fax (41) 22 738 5046. E-mail gn:commonfuture.

Preserving the environment: the children's dimension

Maggie Black, a writer on social development issues and former editor of UNICEF publications, examines the close relationship between environmental stress and the miserable conditions of life and ill health endured by millions of the world's children. UNICEF argues that strategies to improve the lives of those children would in themselves help combat the environmental degradation which threatens the future of all our children.

More than 900 children spend their days delving through the trash on Smokey Mountain, the smouldering garbage tip where Manila has been dumping its rubbish for 45 years. These children, boys and girls from five years up, are pit-face workers for the most marginal of mining economies. They are thin, peaky, filthy, covered in cuts and scratches and literate only in the lingo of scrap.

These 900 children and thousands more in the same occupation in Bombay, Lima, Mexico City and elsewhere in the global megalopolis personify the relationship between poverty, poor child health and environmental disaster.

That relationship is becoming more entrenched daily. The cities of Africa, Asia and Latin America are growing at a phenomenal rate. From 286 million in 1950, the numbers of urban dwellers in the developing world will be just over 2 billion by 2000. The pressure on the city environment is acute; according to the 1985 Brundtland Report: "In the space of 15 years, the developing world would have to increase by 65 per cent its capacity to produce and manage its urban infrastructure, services and shelter merely to maintain present conditions."

In today's economic circumstances, few cities can begin to keep up. Hence Manila's Smokey Mountain, a stinking monument to urban excess 200 metres high and 20 hectares in extent. Hence the proliferation everywhere of slums and shanty dwellings, which in some cities house more than half the population. Three quarters of Lagos' inhabitants live in one room; in Bombay and Port-au-Prince, families share shacks and sleep in shifts.

The adult members of most such families are without jobs or secure livelihoods and cannot avoid a life of squalor. Among the poorest, one child in four dies before age five of diseases related to malnutrition and poor public health.

In cities, a crowded alley alongside an open drain is not a good environment for bringing up children. Environmental pressures impose other strains in the countryside. Pressure on agricultural land, low prices for farm produce, soil erosion and degradation brought on by overuse push the small farmer towards a dead end of environmental decline and lower income.

Without effective conservation, rain-fed cropland in Africa, Asia and Latin America is drastically shrinking, according to the Food and Agriculture Organization of the United Nations (FAO). Of the world's drylands, close to 30 per cent are suffering from desertification. Every year, badly designed irrigation schemes cause the salinization of over 1 million hectares of prime agricultural land.

Hundreds of millions of rural families know nothing of such statistics. But they know the meaning of shrinking holdings, lower yields, poor prices, poorer soils: the land they depend upon for life and health is letting them down.

Menfolk leave for a job in town, placing the entire daily burden of plot, household and family maintenance on women. In some African countries, such as Kenya and Botswana, the proportion of households headed by women is over one third. Women are less educated and therefore have less access to credit, cash and amenities than men. Their predicament rebounds upon their children.

Environmental pressures touch other areas of household management than food. Trees which used to provide fuel for cooking and heating are vanishing. In Malawi, a woman may spend five hours walking to the woods and returning with a load of branches; she can carry so few over the distance that she must repeat the journey every two days.

Water, another vital utility, presents a similar problem. Half the rural inhabitants of the developing world have no safe water supply for domestic use. Having to carry every last drop over a long distance discourages a mother from bathing her children regularly or teaching them to wash their hands before eating. Shortage of fuel means that drinking water is rarely made germ free by boiling. Lack of hygiene is a major killer of young children. Four million die annually from diarrhoeal disease alone.

Many other diseases are spread by insects or organisms which breed or live in water. Every year malaria kills 1 million African children under two years old. Schistosomiasis affects 200 million people and guinea worm 10 million, keeping children out of school and parents out of action.

Environmental pressure is therefore not only intimately linked with poverty, but with the ill health which is itself a compounding feature of both poverty and environmental stress.

Of this triple hammer blow, children are the most vulnerable victims. Every day, 40,000 children under the age of five die from preventable causes.

If a death certificate were issued in every case, the name of one or more sicknesses would be given as the cause: diarrhoeal diseases, malaria, measles, tuberculosis, pneumonia, often compounded by poor nutrition. But the underlying causes are the twin diseases of economic and environmental deprivation whose hold on millions of families leads to young child tragedy.

UNICEF demands that the children's dimension not be overlooked when the world takes action to preserve the global environment. Children have the largest stake in environmental security for the future, and they will suffer most because of poor environmental nurturing today. More than 100 heads of State and Government have signed the Plan of Action for the survival, protection and development of children promulgated at the World Summit for Children. This Plan of Action contains a provision for children and the environment, and UNICEF will continue to remind governments of their pledged commitments.

Supporting household food security in Western Nigeria, using improved strains of drought-resistant indigenous crops, and setting up women's cooperatives for local processing and marketing raises income and improves child nutrition.

The promotion of household latrines in rural Bangladesh dramatically reduces the spread of diarrhoeal disease and improves family health.

Support for urban basic services in the Philippines, including loans for mothers to get into business as shopkeepers and snack vendors, causes fewer children to be forced into scavenging and hazardous street occupations.

As much as half of the UNICEF programme expenditure is devoted to health activities and disease control, and close to one third to programmes that specifically focus on the well-being of women. More important, all activities are small scale and environment friendly.

UNICEF advocates that an environmental dimension be included in the planning of all development schemes; development must be sustainable, leaving land fit to work and air fit to breathe for future generations. Communities currently forced by economic stress to damage the environment — by overgrazing, stripping fuelwood, improperly disposing of waste — can be encouraged to practise 'primary environmental care'. The results will be community wood lots rather than reforestation and community land conservation rather than government reserves. In city slums, community groups can organize local drainage and sewerage.

Finally, and for UNICEF foremost, a direct investment in child health and education is a vital contribution to environmental protection. This investment can take many forms, including medical interventions to control communicable diseases, by immunization and other prophylactic methods, by education — especially for girls — and public health interventions to bring safe water and sanitation within reach of people for whom a hygienic lifestyle is impracticable.

Another investment in child health could be giving women new skills and knowledge both for their own improvement and for their youngsters' well-being. History has shown that a mother's literacy is the best medical prescription for childhood disease, the best family planning device, and an effective agent of fuel and water conservation in hard-pressed environments.

A decline in ill health, child death and poverty would ultimately lead to a demographic benefit for all mankind: a stabilization of population growth rates. Only when low income and high levels of child mortality become a thing of the past do parents accept the idea of controlling family size. Since the pressure of population and lifestyles on global resources is at the heart of the environmental crisis, a determined investment in women's and children's well-being is justified environmentally on this basis alone.

On Smokey Mountain, a small girl in plastic sandals pokes among the rubbish with a long metal hook. Boys follow in a bulldozer's wake watching the clod turn and hoping it will toss some treasure to the surface. Wherever the environment is discussed, these children should not be forgotten.

It is intolerable in the last decade of the 20th century that such children should have to live, work and breathe in this setting of rotting waste cast from the global rich man's table. Their situation is a metaphor for the environmental predicament of the poor the world over.

First PHC ... now primary environmental care

Bill Myers, coordinator of Amazon Project/UNICEF Brazil, has worked for several years with street children and is now working with a regional programme for children and the environment in the Andean countries. He describes here how the new concept of primary environmental care fits well into the traditional programming approach of UNICEF.

One of the key programming ideas to emerge in the global debate leading to the Earth Summit is the concept of primary environmental care (PEC).

It offers a strategy for community-based environmental protection that reflects much of the UNICEF field programming experience and could become the major focus for human development initiatives after the Earth Summit.

The term PEC, coined by OXFAM and other development-oriented non-governmental organizations (NGOs), deliberately and correctly evokes kinship to the primary health care (PHC) ideas consolidated at Alma Ata in 1979 and since implemented in innovative health programmes around the world.

PEC links the objectives of 'health for all' to the overall health of the environment. Just as PHC insists that the wellness of individuals depends in large part on the welfare of their community, so PEC suggests that the well-being of human communities is inextricably connected to the health of their environment.

PEC is a logical 'next step' of the driving ideas of PHC. Like PHC, it places top priority on meeting basic needs of poor and vulnerable populations; it values decentralization and local responsibility; it emphasizes health maintenance over rehabilitation; and it promotes the participation and empowerment of community people, especially women, to assume control over their own lives.

These are cherished institutional values of UNICEF, whose very sense of identity has been associated with the PHC vision. Thus, PEC fits comfortably into the UNICEF traditional frame of reference.

PEC is based on years of accumulated experience by NGOs and others in helping communities deal with the environmental aspects of rural or urban development projects. The lessons from these experiences include:

1. Environmental degradation is an important cause of children's problems.
The reduced fertility of exhausted land intensifies poverty, which in turn threatens child nutrition and health and is therefore properly defined as an economic development and health problem, as well as an environmental one. In some tropical areas, for example, deforestation has resulted in the runaway expansion of malaria, even in places where the disease was under control just a few years ago. In other places predatory fishing or lumbering practices, often by outsiders, have robbed poor communities of traditional food and other subsistence resources. The examples are almost endless.

To ignore the impact of ecological degradation on poverty would be to overlook some of the most viable opportunities for effective intervention. More attention to environmental factors could yield dividends in areas like health, nutrition, education and even human rights.

2. Environmental and other social and economic problems are best approached together, as integrated activities.
Since poverty is a major contributor to environmental degradation, the environment cannot be protected without meeting people's basic needs. But sectoral divisions of responsibility can discourage integrated human-centred approaches. For example, the care of soil is often left to agricultural development agencies and programmes, which deal primarily with men. Yet where women do the farming and the family lives from their produce, soil protection measures may be better promoted as part of nutrition programmes, capitalizing on mothers' interests in their children's health and nutrition.

Concern for children is mobilized to help save the environment — and protecting the environment helps save children. Such synergy occurs when social and environmental objectives are joined. It is often sensible to address environmental, social and economic factors together in the same programme.

3. Many environmental problems affecting poor communities can only be solved through community action.
OXFAM points out that "sustainable development at all levels is about the *process* of change as well as the *product* — it describes a way of developing which empowers people so that their needs and rights are recognized, their voices heard and their knowledge shared ... Experience shows that well-organized communities in resource-poor areas have been successful in meeting their needs while improving the environment — often with only limited outside support. And community-based projects of all kinds show high levels of effectiveness and efficiency in the use of human and material resources."

4. Community environmental action can be stimulated and reinforced through training and assistance programmes.
Non-formal education to help communities see and solve their economic and social problems is the best way to accomplish training for environmental actions. PEC actions can productively be included in mobilization and training activities in areas such as sanitation, health, nutrition, education and general community development.

5. Women are the critical link between environmental and social problems. Their participation is therefore crucial to resolving both.

6. Developing appropriate technological tools helps to empower local communities. Investments in simple technologies specifically adapted to local application can yield enormous benefits, both for stabilizing environmental and economic conditions and for children's well-being. Often the technological principles are already known to the people, but need adapting to modern conditions. UNICEF experience in water development, sanitation and fuel-saving cookers, for example, shows the viability of this sort of work. In many areas, however, the great potential for producing accessible, effective, low-cost technology has scarcely been explored.

Clearly, PEC directly relates to many current UNICEF programme concerns and activities, so much so that it is difficult to imagine how the World Summit for Children goals can be met *without* increased attention to environmental factors.

The environment around children must be improved to raise their prospects for survival. In many places, for example, children's chances of a basic education are strongly related to environmental degradation. The efforts a family must make to survive, such as searching for water or firewood increasingly far from home, can deny their children the chance to attend school.

Environmental destruction can also exacerbate the exploitation of children and other violations of their rights. Studies strongly suggest that the ranks of street children, child prostitutes, child domestic servants and child labourers are swollen by young refugees from the poverty and hopelessness of ecologically degraded rural areas. While the link between environmental degradation and child rights abuse may not be direct, it is in many places very strong.

With its almost exclusive focus on community action, PEC obviously cannot solve such environmental problems as toxic contamination of rivers, or predatory commercial fishing or excessive logging, which need regional or national action.

Yet, even if PEC is not a complete environmental programme, it does represent concerns, objectives and methods particularly consistent with those of UNICEF. It provides a practical framework for addressing the environmental aspects of child survival, development and protection, building on traditional maternal and child health services and the community-focused basic services approach.

Thus, UNICEF is in an especially advantageous position to help launch PEC actions all over the developing world. PEC offers UNICEF an important role in the growing global effort to protect the environment, while at the same time meeting the basic needs of women and children.

Women and children on the environmental front line

A report on the pervasive environmental forces faced by millions of women and children in the developing world and how UNICEF is trying to help them improve their lives.

An Ethiopian woman hunches beneath a crushing load of firewood. A Chilean infant wastes away, a victim of diarrhoea. An Indian child is blinded by a chemical plant explosion.

These are the human aspects of environmental degradation inextricably linked with other broader aspects, such as development patterns, climate change and rapidly disappearing forests. Although the broader issues ultimately affect everyone, it is the poor in developing countries — particularly children and women — who are most vulnerable to environmental disasters and depletion of the earth's resources.

Meeting their basic needs is essential if the vicious circle connecting poverty and environmental degradation is to be broken. It is hard to imagine saving the planet without addressing such problems and improving the immediate environment of the poor. Equally it is essential to change the profligate consumption patterns of the affluent and set new national and international policies on debt, unfavourable terms of trade and other issues that limit developing countries' ability to cope.

Children's growing bodies and minds are most susceptible to the impact of environmental degradation: to disease, malnourishment, pollution and toxic chemicals. Much of the illness and mortality of children in the developing world can be linked to an environment that is the result of poverty.

The adage that the poor die young is generally true. Inadequate nutrition, ignorance, lack of clean water and sanitation produce a fatal cycle of disease and ill health. Diarrhoeal diseases alone claim the lives of some 4 million children every year. In environmentally degraded areas, the exhausting work of women and girls in collecting scarce water and household fuel means much less time and energy for hygiene, child care, food preparation, schooling and visits to health centres. Girls miss out on schooling and often remain illiterate. As local supplies of wood are depleted, animal dung or agricultural residues may be burnt as cooking fuel, leading to the loss of valuable soil nutrients.

With deforestation, soil erosion and loss of water sources the land becomes so severely degraded that adequate household food production is no longer possible. It is usually the poor resource-weak households who suffer the most, with the women and children particularly vulnerable.

Migration from rural areas to escape environmental degradation and poverty adds to the burgeoning populations in urban slums. The poor often occupy the worst sites in the city, near garbage dumps, industrial wastes and flooded land, as these are the only places they can afford. Rapid growth and the near-absence of environmental regulations in many Third World cities also mean that exposure to lead, air pollution and toxic substances are common hazards for growing children.

All these problems are compounded by ignorance and lack of knowledge of basic health care and nutrition. It is no coincidence that in developing countries with very high mortality rates the number of literate women is only two fifths that of men.

Women and children are on the environmental front line. Many of these problems can be alleviated through measures to address basic needs while empowering communities to improve the environment at household and community levels.

UNICEF programmes have long supported such community-based measures as part of the overall effort to promote the well-being of children and women. A broader approach is also being taken through advocacy and initiatives at national and international levels. The 'debt for child survival' initiative in Sudan, where a portion of the external debt burden is swapped for child survival programmes, is one such example. Another is UNICEF advocacy for the girl child, particular where the lack of education or literacy in girls and women perpetuates poverty, ill health and environmental stress.

At community level, there are several examples of UNICEF-supported activities which help to improve the environment or alleviate the impact of environmental degradation and poverty. For example, factors that contribute to a healthy environment, such as clean water, adequate sanitation, health and hygiene education, are all part of programmes to combat diarrhoeal diseases in young children.

Clean water is provided through a variety of means using low-cost technologies, while social mobilization techniques are used to promote latrines and safe sanitation. Often it is found that these are more easily accepted through the concepts of privacy and convenience, rather than for health reasons alone.

While those focus on preventive measures (as do immunization programmes), curative measures are also employed, such as control of diarrhoeal diseases through oral rehydration therapy (ORT) — a typical example of a low-cost, high-impact solution where the impact is multiplied by advocacy and mobilization of communities. The very low case-fatality rate in the 1991 cholera outbreak in Peru has been attributed to the extensive use of ORT and successful community mobilization.

Household fuel problems and related issues of deforestation are addressed by promoting fuel-efficient and smoke-free stoves, small agroforestry projects, community wood lots and alternative forms of energy in several countries such as Bhutan, Ethiopia, Madagascar, Maldives, Myanmar, Nepal and Sri Lanka.

Household food security poses an acute challenge in many developing countries, particularly in arid ones. In such cases, food production methods to ease pressure on scarce land resources are supported, including improved crop varieties, nitrogen-fixing plants, small-scale irrigation and appropriate technologies.

A project in Botswana, which is based on sustainable exploitation of indigenous medicinal and food plants adapted to the drought-prone climate, has helped to diversify from livestock production, while contributing to both household food and economic security. Improvements in productivity of staple food crops in Mozambique, Namibia and Tanzania have recently helped to ensure household access to food, while UNICEF-supported urban food and nutrition programmes address the needs of the urban poor.

Health and environmental education form a part of UNICEF-supported activities. In Madagascar, for example, environmental education of communities was effected through a nutrition education programme in local schools. Parents' associations carried out a range of activities initially introduced in the schools, including construction and promotion of latrines and improved stoves, reforestation, planting vegetable gardens and fruit-trees, and, finally, education in birth spacing and child immunization.

In the cities, UNICEF pays special attention to the needs of poor mothers and children through its urban basic services programmes in many countries. These involve maternal and child health services, water and sanitation, nutrition and education.

To help relieve population pressure on available resources, UNICEF emphasizes that reducing child mortality is a proven prerequisite of effective family planning in poor communities. Immunization and other health services, nutritional efforts, advocacy of breastfeeding, parental education, and longer intervals between births go hand in hand with family-planning programmes.

Education about health and environmental issues is also part of most ongoing UNICEF country programmes. Once people learn to think about their environment, they begin to find their own solutions to local problems. Better parental knowledge of sanitation, personal and household hygiene, food preparation techniques and nutrition can save millions of children's lives.

UNICEF believes that this people-centred approach offers the best prospect for preserving our global environment and achieving more equitable and sustainable development.

A UNICEF goal: clean water and safe sanitation for all

If your water comes from a tap, you may not realize how precious it is. But if you had to walk five kilometres to the nearest water source, a working handpump close to home would seem a miraculous innovation.

Clean water is a survival issue, every day, for much of humanity. About 1.3 billion people do not even have access to the 20-litre daily minimum set by the World Health Organization (WHO). In contrast, per capita water use in some industrialized countries is over 1,000 litres a day.

Diarrhoea and other diseases related to inadequate water supply and improper sanitation kill or disable millions of children each year. Water hauling by rural women and children consumes up to a third of their caloric intake and leaves little time for farming, preparing food or learning.

And as water resources are stretched to the limit by population growth and economic development, environmental mismanagement — pollution, deforestation, excessive use of agricultural chemicals and overpumping of ground water — is contaminating or depleting water supplies throughout the world.

UNICEF is responding to these mounting problems by helping developing countries establish sustainable water supply and sanitation systems.

For years, UNICEF has worked with governments and communities to design and install appropriate wells, pumps and latrines; it also helps teach people about hygiene, and land and water management. These programmes are part of the long-standing work by UNICEF to improve the environment at the community and household levels, fulfilling its mission to combat child hunger and poor health. UNICEF takes a holistic approach that links water provision, proper waste disposal and drainage to health care, immunization, food production, small-scale forestry and educational efforts.

UNICEF involvement in water programmes goes back to 1948, when it first supplied pipes to villages in northern Greece. For the next 20 years, its operations were small scale, mostly demonstration projects, providing assistance in droughts, earthquakes and other emergencies.

That changed in the 1960s, when India asked UNICEF for help in a crash programme to drill wells in tens of thousands of villages hit by drought two years earlier. UNICEF studies determined this was feasible with the use of new compressed-air equipment that could

drill a well in eight hours, a task that previously might have taken one year.

A second technological breakthrough around that time made it possible to reach rural villages on an unprecedented scale. This was the development of handpumps strong enough to service an entire village, rather than a single household. UNICEF, with World Bank support, selected sites for experimental use of the new pumps.

In response to the widespread drought in Africa's Sahel region in 1972-73, UNICEF began a major expansion of its water supply efforts. Also during the early 1970s, UNICEF helped establish programmes in Pakistan, Sri Lanka, Senegal, Sudan and Ethiopia, among other places.

Demand for UNICEF's water services and donor country interest in the effort expanded steadily. By 1978, UNICEF was devoting nearly 30 per cent of its budget to water and sanitation, a 10-fold increase in 10 years. That proportion declined gradually to the current 14 per cent, as local professionals were trained with help from UNICEF and national programmes became better established.

Today, UNICEF spends about $90 million a year on water supply and sanitation work in over 90 countries. This is less than 1 per cent of the $10 billion spent in this sector globally. UNICEF collaborates closely with a host of other agencies and organizations, including the United Nations Development Programme (UNDP), the World Bank and WHO.

The main role of UNICEF is to demonstrate locally the effectiveness of appropriate technologies coupled with training, and to advocate their adoption on a national scale.

Typically, UNICEF involvement in a water or sanitation programme begins with a study of disease rates and other factors. UNICEF staff join government personnel and other experts to plan and implement these initial efforts, and to evaluate and document the results. Governments are then encouraged to replicate successful programmes more widely; UNICEF assists in monitoring the effort.

In Nigeria, for instance, UNICEF began to demonstrate its approaches to water provision and sanitation on a small scale in 1982, and expanded the effort in 1984. In 1987, the Federal Government adopted a national water and sanitation programmme consistent with the principles advocated by UNICEF.

India's programme is the world's largest among those assisted by UNICEF, providing water and (more recently) sanitation services to hundreds of thousands of villages.

The UNICEF approach to environmental work also stresses social mobilization, particularly of women. If members of a community do not perceive a system as their own, they may be unwilling to contribute to its upkeep. Communities need to be involved from the start in setting goals, choosing sites and installing equipment, and local people must be trained in management and maintenance.

What is appropriate?

UNICEF favours appropriate technologies: low-cost systems that communities can operate and maintain on their own.

In a rural African village, for example, a handpump is an appropriate way to draw water from a borehole, since local people have the expertise needed to maintain it. Mechanized pumps require either power lines or fuel for generators; when they break down, communities often lack the skills or parts to make repairs.

A programme that installs handpumps or digs wells in poor communities is sustainable, because it can operate with little or no external assistance. Projects with high maintenance costs quickly consume available funds, precluding the extension of services to communities that still lack them.

A handpump system is also environmentally sustainable, promoting rational and equitable use of limited resources. Handpumps are unlikely to deplete groundwater and leave some areas without any, or to create the wastewater problems and aquifer contamination associated with overpumping.

UNICEF promotes the use of renewable energy sources wherever possible. Solar-powered pumps are practical in hard-to-reach areas (in Mali, Myanmar, Nigeria and elsewhere) because their ease and low cost of operation compensates for extra initial expenses. Wind-powered pumps, though harder to maintain, are in use in Senegal, for example.

Pumps or other machinery aren't needed for gravity-flow projects in the northern hilly regions of Myanmar. These use polyethylene pipes to supply villages with water from higher-up springs and other sources.

Various systems to catch rainwater are being used successfully in a number of countries, especially in Asia. These are most valuable on islands and in other areas where groundwater is scarce or saline. Elsewhere, they generally supplement other sources and reduce the frequency of long walks to springs or ponds.

In Thailand, large jars filled from rooftop runoff in the rainy season provide water in dry periods. In Brazil, household systems make use of rainwater year round. In several African countries concrete surfaces are built to catch water that is then channelled through sand filters to cisterns.

The bulk of UNICEF water-related activities are rural. But UNICEF also supports urban programmes in low-income areas, such as one that helped connect poor settlements to the city water system in Tegucigalpa, Honduras.

Sanitation: a long-term challenge

Promoting appropriate methods of human waste disposal, another UNICEF focus, poses a greater challenge than supplying water. The main obstacle is a lack of demand.

Influencing people to adopt healthier practices and convincing local authorities to make sanitation a priority may take many years.

Better sanitation, along with more plentiful water, could dramatically reduce the incidence of diarrhoeal diseases. Directly or indirectly, these diseases kill some 4 million children under five each year, over one quarter of the total deaths for that age group.

Technically appropriate solutions — not requiring expensive, large-scale sewerage projects — are comparatively simple. UNICEF, for example, helps train local artisans to construct sealed septic pits from precast components. One widely promoted latrine model, developed in Zimbabwe, uses a vertical pipe to vent odours from the pit; a screen at the pipe's top traps flies inside.

Efforts to teach the link between sanitation and health are based on studies of local practices. Cultural or religious factors, notably Islam's emphasis on cleanliness and female privacy, sometimes facilitate the process of changing people's behaviour.

UNICEF-supported campaigns make use of school curricula, mass media and other community information channels. To generate demand for toilets and latrines, demonstration units are set up in schools, clinics and marketplaces.

Related to water supply and sanitation, UNICEF promotes the proper drainage of household waste water, well platforms, irrigation canals and storm run-off. This protects water sources against contamination from sewage and from the increased salinity that results when stagnant water evaporates. Drainage also reduces mosquito breeding sites, helping to control malaria; prevents flooding; and allows land reclamation.

UNICEF is also helping improve the environment in numerous other ways that affect water quality and availability.

Deforestation in many parts of the world is reducing rainfall, increasing run-off, depleting groundwater, and drying up springs and rivers. Various UNICEF-supported efforts counter this process. Community projects plant trees and bushes to halt soil erosion and supply wood lots for household fuel. Fuel-efficient stoves are promoted to reduce wood consumption.

In many countries, UNICEF supports educational activities to increase environmental awareness. These include producing textbooks, training teachers and involving youth in practical projects like planting trees around water sources.

Studies suggest that if everyone had access to water and sanitation, child and infant mortality could be cut in half.

Sustainable technology, children and the environment

William Ryan reviews several UNICEF programme measures that include sustainable technologies to address the interrelated problems of environment and the well-being of children.

UNICEF-supported programmes around the world are promoting a variety of effective, low-cost measures at the community and household levels to improve human health and the environment. These include:

Oral rehydration salts: These salts are used to treat diarrhoea, which largely results from a lack of access to safe water. Described by *The Lancet* medical journal as the greatest medical breakthrough of this century, oral rehydration salts are added to fluids and given to children to replace the water and minerals lost during episodes of diarrhoea. In 1990, this simple and inexpensive oral rehydration therapy (ORT) averted 1.1 million deaths from diarrhoea of children under five years of age.

An estimated 1 billion dollars is spent each year on inappropriate, sometimes harmful treatment with antidiarrhoeals and antibiotics. A World Health Organization (WHO) study found that children's hospital admissions dropped dramatically in countries where parents had been taught to recognize the symptoms of dehydration and use ORT at home.

Programmes to counter child diarrhoeal diseases have been established in 112 countries, and more than one victim in three is now treated with ORT. From 1980 to 1988, the number of packets of oral rehydration salts produced annually worldwide increased approximately 10-fold to 355 litre equivalents. Sixty-four countries now produce them.

Breastfeeding: Breastfeeding is becoming an endangered practice around the world. UNICEF assistance is provided to protect and promote exclusive breastfeeding for the first four to six months of infants' lives and with other food for up to two years of age or beyond. The worldwide decline in breastfeeding is a major contributing factor to child deaths from diarrhoea and acute respiratory infections.

The trend away from breastfeeding has continued even though some countries are now regulating breastmilk substitutes based on an international marketing code adopted by the World Health Assembly in 1981.

Through a global 'baby-friendly initiative' with WHO, hospitals are being encouraged

not to separate mothers and newborns, and to end practices that promote bottle-feeding. Community health workers are trained in the benefits of breastfeeding, and media campaigns are mounted.

The goal of UNICEF is to end the inappropriate or unhygienic use of costly infant formula, sugar water, vitamin drinks and artificial feeding utensils.

Immunization: Child deaths from measles, tuberculosis, whooping cough (pertussis), tetanus, polio and diphtheria have been reduced dramatically as a result of the expanded programme on immunization (EPI) launched by WHO in 1974. With support from UNICEF, other agencies and local authorities, the programme became one of the past decade's biggest success stories in health care. In 1990 national campaigns had reached 100 million infants, 80 per cent of the world's total, at an average cost of around $13 per child.

A single vaccination at nine months of age prevents measles, whose complications such as pneumonia, diarrhoea and encephalitis killed 2 million children a year in the 1980s. Immunizing women against tetanus before or during pregnancy protects newborns from umbilical cord infections that kill 600,000 annually. Combined diphtheria/pertussis/tetanus vaccinations at about 6, 10 and 14 weeks of age can save a comparable number.

Three doses of polio vaccine during the first year of life is currently preventing 440,000 annual cases. One dose of anti-tuberculosis vaccine after birth can prevent 210,000 cases and 105,000 deaths in children under five.

Clean water supply: Methods vary from country to country according to conditions. In Brazil's Amazon region, technology that is locally feasible and durable has been developed to treat water polluted by human waste. The water is decontaminated by passing it through titanium alloy plates charged with a very low DC current. The cost is one fifth that of deep wells or modern centralized water systems.

Gravity-flow projects in Myanmar and elsewhere provide villages with water from springs and other sources, without using pumps or machinery. Intake and storage systems and polyethylene pipes to protect the water from contamination were built mostly with locally available materials.

In several African countries, UNICEF-assisted programmes provide handpumps and help villagers dig wells or harvest rainwater. In Mali, pumps run on solar energy, and in Senegal on wind power.

Sanitation: Programmes in rural areas and urban settlements help install facilities for safe disposal of human waste, such as ventilated pit latrines or water-sealed toilets. Septic pits are constructed to avoid contamination of the water table.

Promotion of proper drainage of household waste water, well platforms and storm

water also prevents contamination, controls mosquito breeding, protects against flooding and allows land reclamation.

Integrated educational programmes and educational campaigns promote personal, household and community hygiene.

Fuel-efficient stoves: These are designed, using locally available materials, to reduce wood consumption and smoke emissions in households and community institutions. A project in Mali conducts cooking demonstrations and recently sold 12,000 improved metal stoves to urban households in one year. Rural women and youth are being trained to build better mud and three-stone stoves.

Parents in Madagascar have been taught to make bricks and build collective stoves and ovens for their children's primary schools. In Kenya, local craftspeople have been trained to build metal cooking systems used in schools, hospitals, prisons and army barracks. In Ethiopia, solar household ovens have been introduced.

Biogas made from human waste is being promoted as a household fuel in a number of countries, conserving wood and easing waste disposal problems.

Home gardening: Drought- and disease-resistant varieties of staple food crops have been developed in various regions. An African programme initiated in 1986 by UNICEF, other agencies and national extension services, has supported the cultivation of improved varieties of cassava, millet, maize, sorghum and grain legumes. Household food productivity has increased as a result in Mozambique, Namibia and Tanzania.

Improved access to small-scale irrigation and secure water supplies has facilitated vegetable gardening in many countries. Community agroforestry projects have planted trees and bushes to halt soil erosion, restore nitrogen and provide fruit, fodder and fuel.

The promotion of urban kitchen gardens has helped poor families meet their needs for green vegetables, legumes and root vegetables. In Bogotá, Colombia, landless residents have been taught hydroponic methods to grow vegetables on their rooftops, using fertilizer and a little water.

Environment action: ideas for young people

Susan Fountain, who works with the UNICEF Education for Development Section, notes the need for action on the environment by governments and suggests several ways for young people to make things happen near home.

We all hope that the Earth Summit in Rio de Janeiro will have long-lasting repercussions on the environment and development policies of the world's governments.

Action by governments is crucial to the survival and well-being of the world's children. Article 24 of the Convention on the Rights of the Child explicitly links environmental quality and the right of children to attain the highest possible standard of health. And Article 29 specifies that one of the aims of education shall be "the development of respect for the natural environment."

The World Declaration on Education for All similarly reminds us that empowering individuals to "achieve environmental protection" should be one of the basic aims of education. A commitment to "work for common measures for the protection of the environment, at all levels, so that all children can enjoy a safer and healthier future" was made by the 71 world leaders who attended the World Summit for Children.

This acknowledgement by so many nations of the need for collaboration in solving global environmental problems is promising.

But action for the environment must happen at every level. To be truly effective these high declarations must be supported with a different kind of action — a realization on the part of us all that we, too, need to be involved and have a personal commitment to environmental action. This kind of action involves *becoming aware, changing one's habits and behaviour* and *becoming involved in positive action*.

Most young people have a natural sensitivity to their environment and to Nature around them. This sensitivity should be nurtured and strengthened through their education and not permitted to disappear in adulthood.

In the UNICEF education for development programme, global learning is seen as having three phases — *exploring* (finding out), *responding* (being committed personally) and *taking action*.

The following activities are suggested as examples of how young people can take action to save and strengthen their immediate environment.

- Make a survey of products sold in local stores: which ones have packaging that is excessive, wasteful or non-biodegradable? Students can design new packaging that uses fewer raw materials, including recycled or recyclable materials. (Art, crafts or design teachers may be able to help with this.) Students can write letters to manufacturers, expressing their opinions about packaging and suggesting new designs.

- How much food is wasted in homes and schools every day? Students can collect food that would be thrown away, and weigh it daily for a week. What can be done to reduce waste? Allow children to take smaller portions? Allow more choice in the content of school lunches?

- Investigate ways to use food being disposed of by the school kitchen. Can any of it be sent to people who could use it? Can it be given to local farmers for compost or animal food?

- Plant a garden at home or on the school grounds. Use waste food or fruit and vegetable peels as compost. Vegetables raised at home can be used in family meals. Vegetables raised at school can be used in lunches or snacks, or donated to local organizations to provide food for the hungry.

- How much water is used at home during the day? Students can measure the average amount used for showering, bathing, cooking, drinking, washing dishes, cleaning, flushing the toilets. They can encourage their families to conserve water by, for example, repairing leaky taps, not letting water run while doing other tasks, or taking shorter showers.

- Imagine what it might be like to live in a place where you do not have access to clean water in your home. How would your life be different? Learn about communities in developing countries where people must walk long distances to collect water. How do people there conserve water? Ask for more information from UNICEF or other groups working to develop safe water supplies.

- How much electricity is used at home or school during the day? Students can total the number of hours during which electric lights are on, or appliances are running. Consider ways to reduce this number — by making sure lights are turned off when there is adequate daylight, for example. Reduce the energy usage of appliances such as refrigerators by thinking about what is needed before opening the door. Use appliances efficiently — for example, run the washing machine only when there is a full load.

- Convince parents to recycle bottles, cans and paper whenever possible. Buy food in bulk, from sellers who will allow you to bring your own containers and refill them. Use reusable cloth bags for grocery shopping.

• Collect used toys. Start a project to clean and repair them, and make them safe for reuse. They can then be donated to a primary school, day-care centre or an organization that can distribute them to children who need them.

• Visit local stores to find out if they carry recycled paper products, such as writing paper, notebooks, envelopes, paper towels and toilet paper. If not, write letters or speak to store managers about the importance of recycling to the environment.

• Start a paper recycling project in school. Collect used notebook paper and find out if it can be recycled locally. Encourage the school authorities to buy recycled paper goods. Experiment with using old paper to make new recycled paper in class. (Instructions for doing this are available from many sources — art teachers may be able to help.)

• Find out if the company which publishes your local newspaper uses recycled paper. If so, what percentage of the paper is recycled? Write a 'letter to the editor' to encourage the use of recycled materials.

• Organize a tree-planting project — on the school grounds, in a park or playground, in a vacant lot or along a local street. Learn about the effects of deforestation. What countries are most affected by this issue and why? Find out about ways that people in developing countries are working to halt deforestation (the Green Belt movement in Kenya, the Chipko movement in India). How could you support these groups?

• Survey your home, school or a local store that sells furniture, find out if hardwoods from tropical rain forests are used in the furnishings. Learn about economic conditions in those countries which have led to the cutting of these trees and the environmental impact. Consider actions that you could take: Boycotting certain products? Writing letters? Supporting groups working for sustainable development?

• Find out the source of beef used for beefburgers in fast-food restaurants. Does it come from countries where forests are being cleared to provide grazing land? What economic conditions have led to this situation, and what are some alternatives? Present your findings in the school newspaper or assembly.

• Start a campaign to convince parents with cars to form car pools for school, after-school events, work, shopping, etc., as a way of conserving fuel.

• Find out what waste materials are produced by local industries. What steps are they taking to ensure that they are not polluting the local environment? Consider whether there are other conservation measures which could be taken and suggest them in writing to the management. Ask for a written response.

• Are any companies in your community/country shipping waste to developing countries for disposal? Contact national or international environmental organizations to find out more about this issue. Write letters to companies or elected officials to express your opinion.

• With school or youth club groups research various organizations that are working to protect the environment on an international level. Presentations about the work of these organizations could be made in assemblies, on bulletin boards, in a collaborative book, or at a school-sponsored 'World Environment Day' fair.

• Write to elected representatives to find out what is being done to encourage use of renewable energy sources — biomass, methane, sun, wind, etc. Make a case for increased research funding, or tax incentives for businesses and homeowners who use such energy sources.

• Contact NGOs which are involved with environmental issues in developing countries — solar or wind energy, appropriate and alternative technologies, soil conservation, agriculture, etc. Learn more about their work and how you can support them.

• Find out what your country's laws say about protecting the environment. Have limits been set for pollution levels? Are certain acts of environmental destruction or pollution punishable by law? How do the authorities check to see if these laws are being upheld?

Ethiopia: a mother and her trees

Jennifer Parmelee reports on a UNICEF-supported family development project that is making a positive impact in an environmentally threatened Ethiopian village.

Ayetu Oda, a mother of four, is doing her bit to protect the global environment, but she doesn't know it. Her reality is simple and immediate: she is working to improve the lives of her children and perhaps her own as well.

An inhabitant of Cheka, a small community not far from the central Ethiopian farming hub of Nazareth, Ayetu has become a leader in planting trees and was the first in her village to abandon the traditional wooden hut for one made of mud bricks.

To the unpractised eye, Ayetu's achievements seem modest. Yet they reflect a profound change in lifestyle that has had a ripple effect throughout her village of some 300 families. Many of her neighbours, envious of the comforts of her solid adobe house, have followed suit. They have found the clay-rich volcanic soil of the surrounding Rift Valley easy to work with, and at least 30 wood-saving brick houses have been constructed over the past two years since Ayetu built her new home.

In addition, hundreds of trees have sprung up in an innovative campaign launched in 1981 by the Family Development Project (FADEP), a small non-governmental organization (NGO) that receives its principal support from UNICEF. Once dusty and barren in appearance, Cheka has been transformed into a verdant enclave where trees offer shade from the scorching equatorial sun, wood for cooking and building, and fruit such as papayas and mangoes.

The tree is a symbol of enormous environmental significance for Ethiopia. Once heavily forested, the country has been steadily denuded in the eternal quest for wood to cook and to build the traditional round thatched huts known as *tukuls*. Until the turn of the century when Addis Ababa became the permanent capital, Ethiopian emperors were accustomed to moving their courts around the countryside until local wood supplies ran out. Since Addis Ababa was founded, Ethiopia's tree coverage has plummeted from roughly 40 per cent to 4 per cent — an alarming rate of deforestation exacerbated by sharp population growth and poor farming techniques. These patterns are not unique to Ethiopia: similar trends are seen across the African continent.

Although the former Government launched many reforestation campaigns, it managed to plant only an average of 6,000 hectares a year, while losing trees at an annual rate of 88,000 hectares. Precious topsoil, meanwhile, is being washed away in a countryside stripped of trees. Nearly one third of the land is so bald that soil depth is just 35 centimetres, barely able to hold moisture or sustain the roots of crops. And in a land that has become synonymous with drought and famine, such trends spell ecological disaster.

Yet, environmental damage is an abstract concept to most Ethiopian farming families who are struggling on the margins of survival in one of the poorest countries on Earth. The lack of trees around a farmer's home means simply that his wife will have to travel 10 kilometres and maybe more to collect wood needed to cook, build or sell to augment family income. Indeed, the sight of women staggering under loads of wood that may weigh up to two thirds of their body weight is common across Ethiopia.

Reforestation can help, but Ethiopia's precipitous loss of trees will not be reversed until peasants realize how they are gnawing away at their own livelihoods — and those of their children. Education is needed to make 'the environment' relevant to the hard-scrabble lives of most Ethiopians, and that is where UNICEF and NGOs like FADEP have stepped in. So far, the results have proved extremely positive, if small in scale.

The UNICEF area-based programme began tree-planting schemes in 1987, starting with 1.3 million seedlings that year and growing to 10 million seedlings in 1990. An estimated 6.3 million trees were planted in 1991, a lower figure than expected because of the fighting that led to the change of Government in May and confusion at the organizational level that followed the end of the civil war.

Perhaps the most encouraging statistic is that the survival rate of saplings is about 90 per cent, according to the UNICEF coordinator for the area-based programme, Kebebew Daka.

Kebebew attributes this success rate to the fact that peasants participate from the planning stage onward and learn in concrete terms how these schemes will improve their lives. They are shown how denuded land is more prone to drought as well as how planting soil-anchoring trees can protect against erosion and scale down the huge workloads of women. In addition, UNICEF has had notable success in reforestation in western Ethiopia by adding a simple economic incentive: for each grinding mill introduced into a community, the peasants must cover at least five hectares with trees.

Similarly, with the Ministry of Agriculture, UNICEF also assists programmes to educate peasants about basic methods of soil conservation and to introduce closed earthen stoves that reduce wood consumption by up to 40 per cent. There is no technical discussion of how smoke contributes to the 'greenhouse effect'; instead, women learn the practical benefits of soil conservation and improved stoves. They discover they have fewer miles to walk to collect wood if they plant trees — and less wood to collect if they use the new stoves.

"The environment is not naturally high on their agenda ... trees have always been there to cut," Kebebew says. "Our job is to gradually build their consciousness, in a very down-to-earth way, and to show them how these steps can benefit them as well as the community."

In Cheka, for example, FADEP stressed the benefits of planting trees and building mud-brick huts as well as developing a clean and safe water supply. It also offered prizes to reward 'environmental' leaders, while bolstering communal pride in the effort by outfitting the tree-planting teams with simple green uniforms. Ayetu won a donkey for her efforts in planting seedlings — a household addition that saves her and her children much back-breaking work — and then went on to build her wood-conserving home. Now she glows with pride as she shows a visitor around.

"The brick is good because it keeps us cool," Ayetu says. "It keeps the rats out and it will last for generations." Her husband, Dadi Tufa, notes that wood-eating worms used to eat them literally out of their homes almost every year. "Now we have defeated the worms," he says, "and we're saving a lot of trees."

Honduras: "There's a problem with the forest"

Donna Paine reports on an environmental education project of planting trees and teaching the young generation of Hondurans to take care of their timber.

Every day before school, Sergio Montezuma Castillo runs into his yard to water a tiny apple tree of his very own. Then he puts fertilizer on it and brushes away any insects that have alighted during the night. For Sergio this budding tree is more than just a seedling, it represents his hopes for the future.

"We learned in school that now in Honduras there is a problem with the forest and it's hurting us all. Without trees there is no water, and without water we can't live," said Sergio, who is in his fourth year at Dolores Bustillo School.

Sergio's face is a picture of intensity when he talks about the tree-planting project on which he and his classmates are working and how it has made him more aware of other environmental issues. It has taught him that he can do something to protect the remaining forests — and convince others to do the same.

"We want to write or call factories here to tell them not to put so much smoke in the air, and also get trash cans put in the forests so that people won't litter," says the 14-year-old boy.

Sergio and about 20 other students in his small school are members of a newly formed Forestry Club which is part of an environmental education programme currently being implemented by UNICEF in several of the barrios that ring Tegucigalpa, the capital of Honduras.

Dozens of these makeshift settlements are perched on the steep, rocky hillsides surrounding Tegucigalpa. Many houses are plywood shacks built on a patch of parched earth; and the residents depend on firewood to cook all their meals and warm their huts. Eighty per cent of all Tegucigalpans use wood for cooking. Here daily survival needs outweigh environmental concerns.

As a result, Honduras loses some 80,000 hectares (197,600 acres) of forest each year in firewood and fires, and another large portion that goes into making its renowned wood products.

The education project, a collaborative effort between UNICEF, the Honduran Forestry Agency COHDEFOR and other interested community organizations, is trying to teach elementary school children how to use these diminishing resources more efficiently.

When it began in 1989, the environmental education project focused mainly on reforestation efforts in the marginal barrios. In its first year, the project distributed more than 15,000 plants to some 5,000 children in 15 schools. Each child was given three trees to plant at home ... one fruit tree, one ornamental tree and one to use for firewood. The fruit trees were various types, including mango, avocado, guava and citrus. The fuelwood trees, such as eucalyptus and acacia, were chosen because they reach maturity within a couple of years and can be pruned for use as firewood without being destroyed.

In the second year, the project was expanded to another 19 barrios, and this time 25,000 trees were given to the children and their families. After two years, three quarters of the trees provided were alive and flourishing.

Seeing the great success of the project and how it planted a seed of enthusiasm in the children, in the third year UNICEF and COHDEFOR revamped the programme to let the students learn how to sow their own seedlings. And this time the programme was put into place in the barrios that were already organized around a UNICEF-sponsored water and sanitation project.

In these neighbourhoods UNICEF had already developed a strong commitment to community organization and participation through a comprehensive project to supply potable water and safe sanitation facilities. The residents of the barrios manage their independent water and sanitation systems, which they helped pay for and construct.

The most innovative part of this new project, though, is the mobilization of children to work towards improving their environment. They are then able to influence their parents and other adults in an enthusiastic and non-threatening way. And the good practices the children learn will remain with them for the rest of their lives.

The project is expanding both its scope and its message. Several more forestry clubs, school nurseries, and home and community tree-plantings are sprouting, not only in the barrios but also in a handful of other urban and rural areas around the country. The programme is being broadened to emphasize environmental and health issues, in addition to reforestation. An environmental education manual has been written to help teachers integrate information into the school curriculum.

These initial efforts are a step in the right direction for a country rapidly depleting its once magnificent forests. Although it is harder to convince adults to stop cutting down trees, littering or burning trash, the conservation message finds fertile ground in children who will pass it along to their parents.

Sergio tells of the last time he went to a nearby wood. "We saw some women cutting trees for firewood because they didn't know the danger they were causing." He gently explained to the women that killing the trees puts all their futures at risk.

Myanmar: gravity flow comes to Myin Ma Hti

Catherine Quoyeser, UNICEF reports officer in Myanmar, tells how a Shan village is changing its life with a new environment-friendly water system.

From a limestone outcrop on the Shan State plateau in north-eastern Myanmar, amid Buddhist stupas and Buddha images, you can see the village of Myin Ma Hti and much of the valley beyond.

After the pine tree stands there are well-tended fruit orchards and fields of cabbage, paddy and carrots, with healthy bullocks and cattle grazing.

Life is good in Myin Ma Hti and in the last couple of years it has improved considerably — thanks to the zone of dark green on the far horizon which is the source of the village's new gravity-flow water supply system.

At an altitude of more than 4,000 feet, Myin Ma Hti is well suited for this environment-friendly technology. Relying on gravity rather than diesel pumps, the system pipes water from a spring just above the village to a 7,000-gallon reservoir and network of 17 tapstands.

U Yein Thaung, the village chairman, says that since 1989 the system has brought water virtually to the doorsteps of 1,450 people. They no longer have to haul it from streams up to two miles away.

He got things moving when he heard about the rural water supply programme of Myanmar's Agricultural Mechanization Department and UNICEF. In his ethnically mixed community of Danu, Taung Yoe and Pa-O peoples, he formed a water committee with other elders and they organized a volunteer workforce.

Traditionally, women do not hold formal leadership roles in the village, although they play the main role in selling fruits and vegetables. Yet, they played an active part in building the water system, working alongside their husbands and older children to dig trenches, lay the donated polyethylene and galvanized iron pipes, and haul local lime for the tapstand masonry.

Daw Hla Myaing, a history teacher in the village's middle school, helped Daw Myint

Zu Saw, the UNICEF project engineer, to implement the project. Together the two women designed and organized informal training for proper use of the new system. Emphasizing conservation, Daw Hla Myaing explained to villagers how to turn off the taps securely and why they should not bathe or launder at the tapstands.

Over tea and peanuts in her timber, brick and thatch cottage, Daw Than Shwe explained the impact of the system on her life and the lives of her eleven children and five grandchildren. "In the past, one trip to the stream took an hour and a half," she said. "Now we can get water in five minutes."

Daw Hla Myaing also reported that attendance at both primary and middle schools has improved since the arrival of the new water system. In the past teachers had to suspend classes one day a week to allow pupils to take a bath. Now the schools share a tapstand, and both children and adults are able to bathe daily.

Daw Nang Phone, Myin Ma Hti's midwife, praised the purity of the water from the underground source and noted a decline in the number of cases of cholera, dysentery and diarrhoea. And villagers report more time for raising the fruits and vegetables which command high prices in the neighouring towns of Kalaw and Aung Ban. Instead of leaving their fields early to collect water each afternoon, they can now work an extra hour or two.

While upkeep has been neglected in some of the 40 gravity-flow projects throughout Myanmar, this is not true of Myin Ma Hti. The water committee pays a salary to U Kyar Pin, who spends about three hours a day maintaining the system. Thanks to the training he received from the Agricultural Mechanization Department and UNICEF, he has successfully mended a leak in the reservoir and pipes damaged by the monsoon. As yet, villagers have not had to pay any user fees.

The system does, of course, have some problems. Because the source is small, the water committee has to limit access to the tapstands during the dry season. And U Kyar Pin has to contend with shortages of spare parts and handtools.

Yet community spirit and solidarity have prevailed over these hardships and frustrations. The villagers have asked for more supplies from the Government and UNICEF, and are seeking funding to link with a larger spring a mile away from the present water source. With a more plentiful water supply, they also want to upgrade their latrine system.

The experience of Myin Ma Hti underlines the importance of human factors in the success of technical solutions. Among the community's critical 'non-technical' resources are the efforts and skills of people like history teacher Daw Hla Myaing — with their good leadership, community commitment and 'can do' ethos.

Nepal: organizing for the environment — for people

Michael Lahan reports on the UNICEF-assisted Environment Project in rural Nepal that is helping to combat rapid environmental degradation.

As the 1987 Brundtland Report of the World Commission on Environment and Development made clear, the long-term welfare of children is inseparable from the need to guarantee them a sustainable environment in which to live.

Nepal's agriculture-based economy has suffered greatly because of the depletion of the country's forests. The loss of woodlands destroys fodder for livestock, protection for water sources and contributes to soil erosion.

In addition, the people of Nepal rely upon the forests for energy, as fuelwood constitutes about three quarters of the country's domestic energy consumption.

These energy needs are exacerbated by the country's uncontrolled population growth and by heavy migration to urban areas brought on by the deterioration of the rural environment. Urbanization plays a big role in the escalation of environmental degradation because of the disproportionately higher demand on natural resources from urban areas.

The Environment Project

Nearly all UNICEF-assisted programmes in Nepal contain an integrated package of environmental activities that includes social forestry, appropriate technology, sanitation and awareness education. These activities are the primary focus of the Environment Project, which aims to improve the overall quality of life for low-income families in Nepal by improving their household and community environment.

The Project began in early 1990 on a pilot basis in 15 sites of the Small Farmers Development Project (SFDP) and the Production Credit for Rural Women (PCRW) programme, both of which had built strong grass-roots constituencies and had proved able to deliver a variety of social services. In 1991, it was extended to 15 more SFDP and PCRW sites, covering 21 of Nepal's 75 districts.

By gradually widening the base of implementing bodies to include government agencies, project activities are targeted to reach 1.2 million subsistence-level families by 1997.

Replenishing the forests

The Environment Project has begun to replenish the country's woodlands by involving the principal household wood gatherers — girls and women — in tree-planting and nursery-management schemes.

In the Project's first year, 2,800 low-income families planted nearly 150,000 saplings, a rate that should grow exponentially with project expansion.

"Before the project began we were already promoting some environmental activities, but it was mechanically done without much emphasis on education," says Shudamani Upadhyaya, a group organizer with SFDP. "Now we spend more time explaining to people why these things are important and necessary, and that has brought much better achievement."

Shudamani related how recently he had met a group of women planting saplings. Not recognizing the species, he asked the women what it offered. "I was amazed," he said, "they told me it was to 'make better air' — you know, to produce oxygen."

Credit programmes for women

The Environment Project's credit programmes for women are also showing results. In the eastern Terai village of Prithvinagar in Jhapa district, only 13 women's credit groups had been organized after 8 years of work. But the number jumped to 37 within 16 months after the new approach began. The new groups are building household latrines, installing small methane gas plants and starting commercial tree nurseries.

Sanitation at home for health

Diarrhoea and acute respiratory infections still account for two of every three deaths among Nepalese children — more than 200 every day. "Sanitation is the single biggest health problem, not only in my district but in all Nepal," says Janak Das Shrestha, the district public health officer for Manang. "Solve that, and many curative efforts would become unnecessary."

UNICEF is extensively promoting two basic technologies to make Nepal's household environment healthier — the pit latrine and an improved household cooking stove — while subsidizing material inputs such as cement.

Latrines help avoid a range of common infections, from diarrhoea and intestinal parasites to hepatitis; they also offer a more comfortable degree of privacy.

The improved household cooking stove significantly reduces the risk of eye and lung diseases because it is smokeless; it also saves wood because it burns more efficiently, reaching a high temperature in less time and staying warm longer.

However, the new stoves have not been readily accepted. The local people are hesitant to give up their centuries-old method of cooking, and the stoves need to be better adapted to local conditions.

"The technology isn't quite right yet for many people to use the improved stove," says Prabat Bangdel, a UNICEF field coordinator. "They are still costly, and most aren't large enough for the kind of big pots women need to boil food for livestock." Soot build-up in the stack also necessitates removing and cleaning it at least once a month, adding to the inconvenience.

But continual refinements have gradually lowered the cost of the new stove and enhanced its feasibility in remote areas. One current model being promoted has been reduced to four basic parts: a length of precast cement pipe, a pipe joint, 18 unfired earthen bricks and a short tripod fashioned from iron bars. It can be assembled in as little as one hour, at a total cost of 106 rupees ($2.50).

Jayamadi Rai lives in Letang village of Morang District, and is one of 28 women who installed the new household cooking stove after participating in a demonstration course at the SFDP Eastern Regional Training Centre. Her thatched-bamboo home has all the typical surroundings of a farming village, the muddy pathway, ground-floor livestock sheds, pools of foul ground water and piles of manure scattered everywhere.

Sanitation here is not easy, but Jayamadi's kitchen is immaculate: pots shine from a wall rack, the earthen floor is swept clean, the air is fresh and a new coating of stucco lends her stove the appearance of a shrine.

She has no trouble articulating its advantages. Because it burns more efficiently than an open fire, she spends only half as much time gathering and chopping firewood. Pots don't blacken nearly as much, meaning an hour less spent cleaning them twice a day.

And her two children no longer scorch their feet and legs on stray cinders when she is cooking, one of the most common accidents in rural Nepali homes.

While the designers continue working to perfect the technology, Jayamadi is well pleased with the help her new stove has already brought her.

Sri Lanka: software for health

Vijita Fernando, a journalist who writes on development issues, reports on an environment health programme that has linked environment issues with family health among the women of Sri Lanka.

Nature has not been particularly kind to the people of the dry north-central region of Sri Lanka. Water is scarce, and sanitation does not exist. In her tiny village, Seela is old before her time. She is 45 and has seen children die of diarrhoea, malaria and malnutrition.

But in the past year she has begun to see some light at the end of the tunnel. There is now a tube well for her village, giving a perennial supply of water. Some families have toilets. Even more important, there is a hope in the environment health programme being implemented by the Lanka Mahila Samiti (LMS).

"We work in a number of villages in the region, travelling on foot most of the time to those remote areas," says Yasawati Sitarage, the LMS field coordinator for the district with its far-flung villages and many problems. "Our focus is on environmental sanitation, use of boiled water for drinking and eradication of mosquitoes — all of which combine to make healthier children."

LMS is the oldest rural women's organization in Sri Lanka. Now in its sixtieth year, LMS has devised a unique system of training promising rural women in the basics of health care, sanitation, preschool management, safe water, basic nutrition and home gardening.

The trained women go home to their villages and pass this information on to other women, translating their knowledge into practice. A network of field coordinators monitors the progress, supervised by a team of organizers. They are all women. All work as volunteers, with only a stipend for people like Yasawathi to visit the field workers.

Malini Jayasekera, dynamic and with the expertise of a lecturer in agriculture, is dedicated to her work as an organizer.

"We are there to travel to district centres to see that the training is carried out efficiently and to provide the 'software' on environmental sanitation and healthy living," says

Malini. "We use locally available raw materials in income-generating projects and home-grown produce for daily eating."

She finds that health education provided even before wells are dug and toilets are built helps the programme. "The women are responsive. The men often help, by digging pits for toilets and other heavy work," says Malini. "But it's a difficult job to see that health practices are scrupulously carried out by poor rural women who are struggling with eking out a living, schooling children, coping with constant illnesses and providing a balanced diet."

After one year of the environmental health programme, the LMS president, Anoja Fernando, says that women are beginning to see the importance of health issues. They now see a link between a healthy environment and their own and their family's health.

"They are beginning to grasp the significance of this benign circle — a clean environment, garbage turning into fertilizer, home gardens, better nutrition for the family and the ancillary bonus of selling some produce and having something to spend on the children. And, of course, better health. This is really our message," says Anoja.

In 1991 the project covered 12,767 households, 547 rural women and 25 senior women coordinators. In all the areas, Anoja sees glimmers of hope: women have responded well and are realizing that high standards of environmental health and education are possible in areas of rural poverty "given the right motivation and organization."

To reach this level, LMS has built on its long years of experience in promoting rural health, focusing on women and children and building awareness among the poorest groups of women. LMS is supported in this programme by the Government's Central Environment Authority and UNICEF.

The main thrust of the programme is on safe domestic water, food safety (which includes showing how not to lose food's nutrient content by improper cooking and how to prevent contamination by flies and improper handling), waste disposal and vector control.

In the preliminary training programme for field coordinators, LMS also worked with the Health Department, the Central Environment Authority, the National Water Supply and Drainage Board and the Colombo Municipality. The three-month session trained 90 coordinators in 28 training centres for 274 *samitis* (LMS branch societies) in 14 districts.

Each *samiti* carried out the programme, with the cooperation of the whole village, in 30 households over three months in a step-by-step system to provide environmental health information, education and training. *Shramadana* (free group services) tackled some of the more urgent community problems.

"Building on last year's first phase performance, the programme will spread to another 15 districts in 1992," says Aung Chein, UNICEF programme officer.

There will be greater emphasis on using mosquito nets and separating wells for drinking water from wells for bathing, clothes washing and animals. More kitchen shelves, covered pots and food covers will be made from local materials. Fuel-efficient clay stoves will save fuel and reduce smoke in the environment, a family health hazard particularly for children.

Targets for 1992 also include individual toilets for each household, garbage and compost pits, better home gardens, tree planting and plant nurseries.

"It's not difficult to make rural women aware of the importance of trees," says Anoja Fernando. "Trees are an important part of our culture and more especially of Buddhism. The Buddha attained enlightenment seated under the majestic *bodhi* tree ... trees are part of our life."

Kenya: clean water means good health

Eight-year-old Wilfrida Akoth knows that clean water and good health are intertwined, remembering only too well the scabies she suffered when her village of Kanyalwal had no safe, clean water.

"It was so bad, all the time I just kept scratching myself," says the grade two pupil at Kanyalwal Primary School, some 56 kilometres from Kisumu, Kenya's lake port town at the eastern tip of Lake Victoria.

She is not alone. Her classmate, Philip Akach, was also a victim of the contagious skin disease. "My mother used a maize cob, hot water and Omo (a washing detergent)," he says, "and I was healed about two weeks later."

Both children associate scabies with poor hygiene, and they blame the disease on the great distance their mothers had to walk to fetch water, which caused them to go several days without bathing.

"Scabies don't come when you are clean," says Wilfrida. "When I had scabies, there was no water in our village. My mother had to walk a long distance to get water which was not even clean. She needed it to cook our meals first, and if there was any left, then we bathed. Sometimes we bathed only once a week."

Seven-year-olds Evelyn Achieng and Daniel Okoth both associate diarrhoea with drinking dirty water and eating contaminated food.

"We should avoid drinking dirty water and using dirty utensils. And we should keep latrines covered," says Daniel.

Both Evelyn and Daniel have learned how to make a sugar-salt solution to prevent dehydration of a young child sick with diarrhoea. At only seven, they often look after younger siblings, while their mother is away, usually engaged in survival activities. Their prompt attention to a child's diarrhoea often means the difference between life and death.

"I take a spoonful of sugar and a pinch of salt and add it to a kimbo (a half-kilo cooking fat container) of water. And I give it to the baby to drink slowly," says Evelyn.

The water situation in Kanyalwal is better now because of a water tank installed at the Kanyalwal school. Clean water is readily available, not only for Kanyalwal, but also

for the neighbouring village of Kang'ombe. Mothers need no longer rely on distant and unsafe water sources. And a special school initiative has made the children aware of the relationship between good water and good health.

Although water is the most important environmental consideration among the children in Kanyalwal, other issues related to environmental sanitation have not been overlooked.

Malaria is endemic in the village, and eight-year-old Caleb Oloo knows all about the "very bad pain in the head and tiredness in the joints" the killer disease can cause.

Oloo now does what he can to keep down the population of malaria carriers — mosquitoes. "I have to cut the grass around the homestead and to remove tins in which water could collect. We must not allow water to stand near the house." He would like to sleep under a net to protect himself from mosquitoes, but he cannot afford one.

The children of Kanyalwal know nothing of the Earth Summit, but they realize that the condition of their environment rules the quality of their lives.

Philippines: "So long as the trees live, we will live"

In her young mind's eye seven-year-old Rosabelle 'Robbie' Oribello sees the costs of harming the environment: "When the forests have gone bald, the floods will come; when the rivers are full of garbage, they will die and soon the fish will die too; and when vehicles belch out soot, many children will get sick."

A first grade student at the Miriam College Foundation in suburban Quezon City, she has learned in civics class that even children must care for the environment. Robbie's school, a privately owned institution, is one of only a few in the country to have integrated environment education into their curriculum.

Generations of Filipino students before Robbie were told only that the Philippines was a country immensely rich in natural resources. Hardly any discussion was conducted in class about how fast and extensively the country's forest and marine resources have been depleted, how its air and water resources have been polluted.

Concerned about the future of the environment, Robbie asks why the loggers who cut down trees don't replace what they take from the earth: "It's OK if this is their job, but why are they not replanting?"

The forests stop the floods, she explained, because "the roots of trees take in rainwater so it will not flood."

Robbie is the eldest of the two daughters of Rodolfo and Rowena Oribello, who both work in the Makati financial district. The Oribellos live in a fourth-floor apartment at the Sikatuna Bliss Village, a middle-class government housing development with some 300 families. The apartment has three rooms, a comfortable enough arrangement for the Oribellos. Robbie shares one room with her sister, five-year-old Romina, who is a kindergarten student, also at Miriam College.

With the rest of the tenants, the Oribellos endure the complex's unreliable water supply. For several months in 1991, the building's pipes were dry, except for a trickle of water, and that flowed only at night.

So the residents had to climb up and down four flights of stairs each night, water pails in hand, to collect enough water for bathing, cooking and washing the next day. But it soon became apparent that the water was not safe to drink. Children in the apartment complex began coming down with diarrhoea, and the water fetched for drinking had to be boiled.

Robbie traces their problem with inadequate and unsafe water to unhealthy garbage disposal. "The supply of water is diminishing and getting dirty because we keep throwing garbage just anywhere, even into rivers and canals," she said, citing still another lesson learned in civics class.

Civics has become Robbie's favourite class in school, and when she grows up she wants to teach the subject. She explains, "The class is conducted in the Filipino language. We also learn about institutions like the church, the hospital, the school." Given what she knows about the environment, would she give any message to President Corazon Aquino and other world leaders, if she had the chance? Robbie pondered the question and then replied, "Yes. Let us plant trees. And we must stop vehicles from belching smoke."

Robbie believes that where the environment is concerned, our future can be put quite simply: "So long as the trees live, we will live."

How can we raise the world's ethical 'floor'?

Hazel Henderson, author of 'Paradigms in Progress: Life Beyond Economics' and 'The Politics of the Solar Age', is an international consultant on alternative development policies. She analyses here how events like the World Summit for Children signal to the Earth Summit the need for new ethical standards in an interdependent world.

The fate of the world's children, the fate of the Earth and the future of the human family are, of course, inextricably linked. Yet there is a prevalent mind-set in today's world that systematically denies many such linkages and the seamless web of relationships by which humans live with each other and Nature.

Denial of such obvious linkages is not merely a strategic stance governments use, but is part of a much deeper mind-set that predominates governments, business, the media, academia and most modern institutions. It also allows and even encourages the fragmented perspectives that prevent us from remembering that the world we inhabit is whole.

The powerful and often unintended consequences of this compartmentalized view of reality are unavoidable: polluted skies, toxic dumps, oil spills, advancing deserts, shrinking forests, broken families and communities, and millions of neglected children. Forty thousand children die every day, with millions of others malnourished or roaming the streets of our cities, homeless and abandoned.

Today, some 300 years after 'scientific enlightenment' began, its cultural power still dominates the policies of most of the world's leaders. The pursuit of narrowly defined production efficiency and its rationalistic formulas for employing the Earth's resources and people still drive macro-economic management policies of all governments, left, right and centre.

In the early factories, children and women, still viewed as chattels, became the lowliest workers. Factories themselves were based on the idea of removing production from its cultural roots in the home and community to permit splitting and rationalizing the process into hundreds of mindless tasks. Today, as industrialization spreads around the world, urban areas grow cancerously, while rural communities are left, together with traditional cultures and peoples, in the backwash of 'economic growth' and 'progress'.

At last, in the 1990s, all these side-effects of pursuing an ever-rising gross national product (GNP) have become too visible to be denied. People everywhere are awakening from the 'technological trance'. Media have helped enormously in this awakening — albeit long after the environmental movement of the 1960s. Twenty-year-old environmental horror stories, well-documented in thousands of environmental groups' newsletters, suddenly became 'news' around 1989 and began appearing in the news magazines and on television.

The linkages and interconnections and the overall impact of mass consumption-driven economies on the Earth became unavoidably obvious. The losers in the industrial race also became more visible: the less developed countries could only develop like the Northern industrial countries if the North became more frugal and shared the Earth's remaining resources more fairly. The 'marginalization' of rural and ethnic peoples, women, children and the weak began to be seen as an integral part of the process of blindly pursuing GNP growth and narrow definitions of efficiency and progress.

Another leap in awareness came in September 1990 when 71 heads of State and Government met at the first World Summit for Children. The leaders signalled an emerging paradigm of accepting the interconnections of life by taking public responsibility for the condition of the world's children.

At the Summit a new commitment was made: to try to end child deaths and child malnutrition on today's scale by the year 2000 — and to provide basic protection for the normal physical and mental development of all the world's children. The Summit exposed the 'quiet catastrophe': not only the 40,000 child deaths each day, but the 150 million children who live on with ill health and poor growth, the 100 million 6- to 11-year-olds who are not in school. At last, these shocking statistics were publicly linked at the highest levels to the fact that the means of ending this quiet catastrophe were now both available and affordable.

This linkage also signalled that the rationalistic, narrow 'left brain' approaches were expanding to include the more 'right brain' moral and intuitive grasp of whole systems needed to address the world's intractable problems: environmental destruction, poverty and social neglect amid rising populations and shrinking resources, with soaring debt accompanying growth of GNP in more and more countries.

The World Summit for Children took the giant step of linking many of the formerly disparate parts of the story, thus laying the groundwork for the world leaders' historic promise and their plans of action into the next century.

Another vital linkage was highlighted between population growth and infant mortality which reversed the Malthusian view that mortality rates must balance with birth rates. Rather, the reverse is true regarding child mortality: when children can survive with such cheap, simple remedies as oral rehydration therapy for diarrhoea, parents gain a sense of confidence. *The State of the World's Children 1991* noted that the total cost of such inexpensive prevention and treatment programmes — which could

save the lives of 9 million children — is $2.5 billion annually (what the United States spends each year to advertise cigarettes). Such a comparison shows clearly the difference between money and wealth.

It is not surprising that the grass-roots movements to heal the Earth and to care for the world's children are more effective in pressing these agendas on politicians than those of specialists and academics. The powerful, reintegrating, passionate concern showed by grass-roots groups — whether the Chipko movement in Asia or the Greenbelt movement in Africa to protect and restore forests — and the worldwide efforts to prod media to write about the plight of children have helped to elevate children and the environment among global priorities.

Today, the planet is teaching humans at every level in a very direct way. The Earth is like a vast programmed learning environment, giving us all positive and negative nudges towards a more survivable path to further development. The lessons are: cooperation and prevention.

With the globalization of industrialization, technology, communications, financial markets, migration, the arms trade and the resulting effects on the biosphere, interdependence has become a fact of life. As the ecologists say: everything is connected to everything else.

The old competitive rules of the global economy cannot work when all the niches in the market-place are filled. Many former market-places must now operate globally: the world's oceans, atmosphere, electronic spectrum and even outer space must be shared as the common heritage of all the world's children.

This requires a shift from 'win-lose' competitive rules to 'win-win' rules and cooperative treaties and agreements to prevent overuse, which leads to the worst outcome of all: everybody loses.

In today's interdependent world the old economic rules of the global market-place competing to maximize GNP are creating a behavioural sink: the 'winner' is the company or country that can exploit its people and ecosystems the fastest.

The new global playing field needs to be levelled, but not by using economists' formulas which tend only to level forests and ecosystems and cultures. Instead, we need to raise the level of the global playing field by placing an ethical 'floor' under it, i.e. new rules, treaties and agreements for protecting children, workers, consumers and all people as well as the environment.

This new ethical playing field is slowly emerging, via United Nations treaties and protocols and by action plans like that for the world's children. As this latticework of agreements is put in place the whole world game will change. The new winners will be the countries and companies that act towards preserving and enhancing the environment and the long-term health of all the world's people.

As 'investments' continue to be redefined by a fuller accounting of all the costs and long-term impacts of our economic activities, we will come to see that investing in people and in maintaining our natural resources is the long-term pay-off.

In a signal to the Earth Summit, the Action Plan for the World's Children makes this new calculation clear: as we really knew in our hearts all along, investing in children assures that we will have a future.

Environment issues are human rights issues

Trevor Davies, Secretary-General of Defense for Children International, views the Earth Summit from the human rights perspective.

Many resources have been devoted to the preparation of the United Nations Conference on Environment and Development (UNCED). To what end? Is it just a means to prevent real development of the developing countries, as some have suggested? Or will it really address the problems that face us all in the coming decades?

Many suspect that the problems of development have received, and will receive, little attention from this important conference. During the four weeks of the Preparatory Committee's third session, for example, the time allocated to discuss poverty, health and education (which are development and human rights concerns) was one afternoon session — whereas oceans occupied the attention of a whole working group.

Seven of the nine sets of issues to be addressed by the Earth Summit's Earth Charter have a major scientific component, whether related to climate change, freshwater resources, the protection of oceans or managing biotechnology.

The danger is that the scientists involved in these issues, wherever they are employed, will want to show their prowess and provide scientific solutions, while ignoring the effects of these 'solutions' on development and human rights.

It should be understood that environmental issues are human rights issues, particularly those that affect children's rights. What we do with the Earth today has a profound influence on future generations.

This is too big an issue to be left solely in the hands of scientists. The environment should not be seen through scientific spectacles, whether they are rose tinted or not.

It is evident that environmental safeguards are costly. There is therefore a built-in self-interest by governments and industrial pressure groups to limit these costs as much as possible — because governments may have other priorities or because industry may be unwilling to pay the price.

Are governments and private banks really willing to forgo the repayment of debt in order that countries may start to develop instead of being made dependent on aid?

Is industry ready to forgo the making and selling of weapons of mass destruction in order to put their expertise at the service of humanity instead of enabling individuals and societies to kill people?

Are governments willing to change the policies of the major world financial institutions in order to allow not merely environment-friendly development but people-oriented development?

UNICEF is to be commended for presenting its human-centred strategy for environmental improvement at the Preparatory Committee meeting, where it again became evident that for many countries of the South the crucial issues are development and the allocation of resources, with the environment being seen as only a part of the whole equation. It is urgent that the concerns of future generations be addressed specifically at UNCED.

The Conference's action plan, Agenda 21, must address financial and technological problems and also the implementation process. The linkages between all United Nations agencies will be closely examined, which could lead to a review of mandates.

Non-governmental organizations (NGOs) will have to make sure that all concerned in the process realize that the purpose of any change should be to ensure that it is people who benefit.

There have been many positive statements about the role of NGOs on the road to Rio, and many governments are anxious to have them at the Conference. But it is imperative that NGOs themselves approach the Earth Summit with a united human rights perspective.

The Convention on the Rights of the Child states clearly children's rights to life, survival and development, health, education and an adequate standard of living — all 'development' issues. Yet, despite the ratification of the Convention by more than 100 countries and despite the reports of the United Nations Environment Programme (UNEP) and UNICEF, the issues of environment and children appear to have been forgotten.

The Earth Summit's potential is enormous. It could be the one United Nations conference to influence the whole of humanity in a positive way. It could actually set the course for sustainable development.

This will require not only major changes in the way we use both human and material resources, but also the participation and imagination of millions of people.

If environment issues are *not* treated as human rights issues, where will UNCED end?

Mark Edwards/Still Pictures

A squatter family lives on the grounds of a power station in Calcutta, India — an example of the deteriorated environment in which many poor urban populations must live, on the margins of their ever-expanding cities. The station is coal-fired, a contributing factor to earth warming.

UNICEF/5019/Sprague

Young people play on a beach near an industrial park in Romania. The impact of uncontrolled industrial pollutants on the growth and development of many children in Eastern Europe underlines the importance of giving priority attention to their needs in a time of economic and political transition.

Mark Edwards/Still Pictures

Environmental pressures touch many areas of household management besides food. Women in Burkina Faso spend hours every day searching for and carrying wood to make their fires. Dependency on wood for fuel is a major factor in the depletion of African forests.

UNICEF/915 413 5(B91-1)/Luhan

A Nepalese woman cooks using a smokeless stove. UNICEF supports the construction of smokeless domestic stoves, which greatly reduce kitchen smoke and related respiratory illnesses, burn wood almost twice as efficiently as open fires and eliminate scorching accidents caused by stray cinders.

Mark Edwards: Still Pictures

A woman washes cooking utensils in an open drain in Bombay, India. Clean water is a survival issue, every day, for much of humanity. About 1.3 billion people do not even have access to the 20-litre daily minimum set by the World Health Organization (WHO).

UNICEF/5021 C/Horner

A child lives and plays amid garbage on the waterfront in Esmeraldas, Ecuador. Thousands of children in the developing world spend their days delving through such garbage. These boys and girls personify the relationship connecting poverty, poor child health and environmental degradation.

UNICEF / 4857 Z. Scandelli

In environmentally degraded areas, the exhausting work of women and girls in collecting scarce water and household fuel means less time for hygiene, child care and schooling. Young women wash their clothes in the contaminated waters of a local river near the town of Suleymania, Iraq.